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John Pell

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LORD BACON:

HIS

LIFE AND WORKS.

'FOR MY NAME AND MEMORY, I LEAVE IT TO MEN'S CHARITABLE SPEECHES, TO FOREIGN NATIONS, AND THE NEXT AGES.'

LORD BACON.

CHARACTER
of
LORD BACON:
His
LIFE AND WORKS,
BY
THOMAS MARTIN,
Barrister at Law.

London
A. MAXWELL, LAW BOOKSELLER TO HIS MAJESTY,
BELL YARD, LINCOLN'S INN.
MDCCCXXXV.

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PREFACE.

It may, perhaps, be expected, that some reason should be assigned for the appearance of the present volume so soon after the publication of a Life of Bacon by the learned editor of the last collection of his writings. Without presuming to offer any remarks upon a work already submitted to public criticism, I venture to express a hope that the following pages will be found not altogether destitute of interest, nor even of novelty.

To those who are conversant with lord Bacon's works, it is well known that

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his valuable Letters contain many most interesting personal notices, strongly illustrative of his character:—these I have assiduously collected; and weaving them into the narrative of his life, have thus endeavoured to give it something of the nature and interest of autobiography. 'Such letters as are written from wise men,' (lord Bacon himself observes,) 'are of all the words of man, in my judgment, the best; for they are more natural than orations and public speeches, and more advised than conferences or present speeches. They are the best instructions for history, and, to a diligent reader, the best histories in themselves.'

Another object steadily kept in view, has been to give a popular, yet brief, ac-

count of lord Bacon's principal works,—not a mere naked abstract, for that would present little or no attraction to the general reader; but an account illustrated, when necessary, with examples drawn from those splendid discoveries in science which have been made since the introduction of the Baconian System. Some remarks are likewise offered on the *influence* of lord Bacon's Philosophy upon the progress of knowledge, chiefly with the view of showing how destitute of foundation is the opinion, that it did not accelerate the advancement of science—an opinion, indeed, so glaringly erroneous, that it could scarcely have justified any consideration, had it not been broadly and unhesitatingly avowed by sir Da-

vid Brewster, in his late Life of Newton.

The curious verses by lord Bacon, which will be found at page 297, were first printed in Farnaby's *Florilegium Epigrammatum, etc.*, together with a Greek version, in rhyme, by that singularly gifted man, and published in 1629. They are not, I believe, inserted in any edition of Bacon's works, nor do any of his biographers appear to have been aware of their existence. Having unsuccessfully sought for the *Florilegium* in the Library of the British Museum, and several other extensive collections, I at length discovered, from a reference in the last excellent edition of Wood's *Athenæ Oxonienses,* that a copy was preserved in the Bodleian Library, from

which I have been favoured with a transcript both of Bacon's poem and Farnaby's version, through the courtesy and kindness of the reverend Dr. Bliss, of St. John's College, Oxford.

For the beautiful medal by Mr. Wyon, of the Mint, from which the head of Bacon in the title-page has been engraved, I am indebted to that gentleman; who obligingly directed a fresh impression to be struck, for the purpose of the present work.

LINCOLN'S INN,

June 30th, 1835.

LORD BACON:

HIS LIFE AND WORKS.

'For my burial,' said lord Bacon,—these are the words of his last will,—'For my burial, I desire it may be in St. Michael's Church, St. Albans: there was my Mother buried, and it is the parish-church of my manor-house of Gorhambury, and it is the only Christian church within the walls of Old Verulam. For my name and memory, I leave it to men's charitable speeches, to foreign nations, and the next ages.'

A legacy so splendid the world never before received. It is the *name* of one who was, emphatically, the minister and inter-

preter of Nature,—the chosen instrument for communicating to mankind that knowledge which an awful Providence, whose ways are not our ways, had hitherto concealed from the sight of man. It is the *memory* of one who will never be forgotten whilst eloquence can be felt, philosophy understood, or wisdom revered.

To learn what was the life of so illustrious a character,—to contemplate such unexampled excellence, cannot but tend, by exalting our conceptions of our own nature, to impart an unwonted elevation to our thoughts, to enlarge and ennoble our views; and it will, we trust, induce such of our readers as are not conversant with lord Bacon's works, no longer to neglect those rich treasures of wisdom which he gathered, not for his own glory, but the good of men.

Francis Bacon was born on the 22nd January, 156$\frac{0}{1}$, at York House, in the Strand. He was the youngest son of sir

Nicholas Bacon,* of whom it was said by Queen Elizabeth, 'My lord Keeper's soul is well lodged.' His mother, one of the daughters of sir Anthony Cook, tutor to king Edward VI., was as learned as she was virtuous, having been accustomed, from her youth, to those robust studies which, without impairing the graces of womanhood, impart a lasting strength and lustre to the mind. It was usual for her father, when he returned in the evening from instructing his royal pupil, to gather his daughters around him, and instil into them those lessons which, in the morning, he had taught the Prince. They were all skilled in the learned languages; and Ann, the mother of Bacon, besides other literary productions, made an elegant version, in English, of Bishop

* Camden thus characterises sir Nicholas:—'A man exceeding gross-bodied, sharp-witted, of singular wisdom, rare eloquence, excellent memory, and a pillar, as it were, of the Privy Council.'—History of Elizabeth, p. 235.

Jewel's famous Apology, which was so much esteemed by Archbishop Parker, that, by his special order, it was published for common use.*

Springing from such a stock, and trained up by parents so excellent, it need excite no wonder, that Bacon, in the very spring-time of his life, put forth the buds of promise, and attracted, when a child, the attention of the Queen. She delighted to prove him with questions, which he answered with such ability and gravity, that Elizabeth would often playfully call him her young lord Keeper. Upon the Queen's asking him how old he was, he readily answered, 'two years younger than your majesty's happy reign.'†

* Strype's Annals of Elizabeth, c. 25, p. 251. There appear to have been two editions by lady Bacon; one published in 1562, two years after the birth of her youngest son, Francis, and the other in 1564.

† Rawley's Life of Bacon, prefixed to the Resuscitatio. His recent biographer states, (but without re-

From his birth, Bacon was a delicate child, and so acutely sensible to atmospheric influence, that any peculiar change in this respect would cast him into a fit of fainting.*

ferring to any authority for the fact,) that Bacon, when a boy, while his companions were playing in St. James's Park, stole away to the brick conduit, to discover the cause of a singular echo. (Montagu's Life of Bacon, p. 3.) In his Natural History, Bacon certainly alludes to a brick conduit in St. James's fields, and accounts for the loud sound produced by blowing through a small aperture, on the principle that, as the channel of sound was a concave, proceeding from more narrow to more broad, the 'air and sound being first contracted at the lesser end, do dilate themselves, and, in coming out strike more air, whereby the sound is the greater and baser.'—Bacon's Works, vol. 4, p. 87.

* 'It may seem,' says Dr. Rawley, 'the moon had some principal place in the figure of his nativity; for the moon was never in her passion or eclipsed, but he was surprised with a sudden fit of fainting; and that, though he observed not, nor took any previous knowledge of the eclipse thereof; and as soon as the eclipse ceased, he was restored to his former strength.' 'I remember,' says Aubrey, 'sir John Danvers told me that his lordship much delighted in his curious garden at Chelsea; and as he was walking there one time, fell down in a swoon. My lady Danvers rubbed his face,

Notwithstanding this constitutional delicacy of temperament, (too often the fatal attendant upon genius,) he was, at the tender age of thirteen, sent, with his brother Anthony, to Cambridge, and, on the 10th June, 1573, entered of Trinity College, under Dr. Whitgift, who afterwards became Archbishop of Canterbury.* After three years residence in the University, he went to reside at Paris, with sir Amyas Paulett,† the English Ambassador, and afterwards travelled into the French provinces, spending some time at Poictiers, the Limonum of the Pictavi, and famous for its curious collection of antiquities.

temples, &c., and gave him cordial water: as soon as he came to himself, said he, *Madam, I am no good footman.*' He was so delicate, that he could not bear the smell of neat's leather, and none of his servants durst appear before him without Spanish leather boots.—Bacon's Works, vol. 16, note (G.)

* Strype's Life and Acts of Dr. Whitgift, p. 77.

† Rawley's Life, and see Bacon's Works, vol. 12, pp. 159, 282.

During his residence abroad, he invented a new system of ciphers, which he afterwards incorporated into the first part of his Instauration. It appears, too, that even at this early period of his life, Bacon was actively employed in examining the phenomena of Nature, and, in particular, of Sound;—a subject not even yet exhausted, and in the investigation of which, some of our most eminent philosophers are now engaged.*

* See sir John Herschel's Treatise on Sound, printed in the Encyclopædia Metropolitana. This distinguished philosopher observes, that Bacon was one of the first who made the nature and laws of Acoustics a matter of experimental inquiry.—Herschel on Natural Philosophy, p. 248. 'Whoever,' said the late sir James Mackintosh, 'is desirous of estimating the value of knowledge, will find the noblest observations on that grand subject, which have been made since Bacon, in Mr. Herschel's Discourse on Natural Philosophy,—the finest work of philosophical genius which this age has seen. In reading it, a momentary regret may sometimes pass through the fancy, that the author of the Novum Organum could not see the wonderful fruits of his labour in two centuries.'—Hist. of England, vol. 2 p. 132, note.

That he had the justest notions on this most interesting and important branch of science, abundantly appears from many passages in his Sylva Sylvarum, among which we may notice his explanation of the phenomenon of echoes upon echoes,* which he correctly ascribed to the reflection of sound—'not echoes from several places, but a tossing of the voice, as a ball to and fro;'† and it appears (a fact which has not, we believe,

* Bacon's Works, vol. 4, pp. 128, 129.

† The Poet's description is as just as it is beautiful:—

'The Rock, like something starting from a sleep,
Took up the Lady's voice, and laughed again:
That ancient Woman, seated on Helm-Crag,
Was ready with her cavern: Hammer-Scar,
And the tall Steep of Silver-How, sent forth
A noise of laughter; southern Loughrigg heard,
And Fairfield answered with a mountain tone:
Helvellyn far into the clear blue sky
Carried the Lady's voice,—old Skiddaw blew
His speaking-trumpet,—back out of the clouds
Of Glaramara southward came the voice;
And Kirkstone tossed it from his misty head.'

Wordsworth.

been ever noticed before,) that, in this country at least, Bacon was the first to suggest the construction of the instrument, since called the ear-trumpet, but to which he gave the name of 'ear-spectacle.'*

These pursuits, so congenial to his mind, the sudden death of his father† compelled

* The following are Bacon's own words:—'Let it be tried, for the help of the hearing, and I conceive it likely to succeed, to make an instrument like a tunnel, the narrow part whereof may be of the bigness of the hole of the ear, and the broader end much larger, like a bell at the skirts, and the length half a foot or more. And let the narrow end of it be set close to the ear; and mark whether any sound, abroad in the open air, will not be heard distinctly from farther distance, than without that instrument, being, as it were, an ear-spectacle.'—Bacon's Works, vol. 4, p. 139.

† Sir Nicholas Bacon died on the 20th February, 1578-9, and was buried in St. Paul's Cathedral. (Camden's Brit. vol. 1, p. 315.) 'I remember,' said lord Bacon, 'that being in Paris, and my father dying in London, two or three days before my father's death, I had a dream, which I told to divers English gentlemen, that my father's house in the country was plastered all over with black mortar.'—Works, vol. 4, p. 526.

him, for the present, to relinquish; and the young philosopher immediately returned to England.

Finding, on his arrival, that his patrimony was too scanty for his support, ('for my father,' said Bacon,* 'though I think I had greatest part in his love to all his children, yet, in his wisdom, served me in as a last comer;') he endeavoured, under the countenance of his uncle, lord Burleigh, to obtain some employment at court. His suit, however, was rejected; and with great reluctance, he entered upon the study of the law. It was about the year 1580 that he became a fellow of Gray's Inn,—a place to which he was always fondly attached. In the walks of its spacious garden, he caused to be planted an avenue of elms, substituting, as occasion required, new plants for those that decayed.† In these tranquil occupations Bacon took great delight, finding, as he

* Bacon's Works, vol. 13, p. 87.

† Dugdale's Orig. Jurid. p. 273.

himself says, that a garden yielded not only the purest of human pleasures, but afforded the greatest refreshment to the mind. How exquisitely beautiful is his remark, that 'the breath of flowers is far sweeter in the air, where it comes and goes, like the warbling of music, than in the hand!'* Besides improving the garden of Gray's Inn, he also 'erected,' says Dr. Rawley, 'that elegant pile or structure, commonly known by the name of the lord Bacon's lodgings, which he inhabited, by turns, the most part of his life.' In which house, adds his worthy chaplain, he carried himself with such sweetness and generosity, that he was much revered and loved by the readers and gentlemen of the Inn.†

* Essay on Gardening, vol. 1, p. 154. In his Sylva Sylvarum, he says, 'Gentlewomen may do themselves much good by kneeling upon a cushion and weeding. I knew a great man that lived long, who had a clean clod of earth brought to him every morning as he sat in his bed, and he would hold his head over it a good pretty while.'—Bacon's Works, vol. 4, p. 500.

† Rawley's Life of Bacon. There is a tradition that

Having been admitted within the Bar, he was soon called up to the Bench, and nominated Reader;* and shortly afterwards appointed, '*ratione verbi Regii Elizabethæ*,' her counsel learned extraordinary,—'a grace,' says Rawley, 'if I err not, scarce known before.'†

In the Parliament which met in the year 1592, Bacon sat as one of the knights for Middlesex; and early in the session delivered a speech in favour of reform in the law, to which subject the Queen had called the attention of the house. The following report of it has been preserved:—

'Mr. Speaker,—That which these honourable personages have spoken of their experience, may it please you to give me leave, likewise, to deliver, of my common knowledge. The cause of assembling all

the lord Bacon's lodgings were in Gray's Inn Square, No. 1.

* Dugdale's Orig. Jurid. p. 295.

† Rawley's Life of Bacon; Rymer's Fœdera, vol. 16, p. 596; and see Note (A.)

parliaments hath been hitherto for laws or monies; the one being the sinews of peace, the other of war; to one I am not privy, but the other I should know. I did take great contentment in her majesty's speech the other day, delivered by the lord Keeper; how that it was a thing not to be done suddenly, or at one parliament, nor scarce a year would suffice to purge the statute-book, nor lessen it, the volumes of law being so many in number, that neither common people can half practise them, nor lawyers sufficiently understand them, than the which nothing would tend more to the praise of her majesty. The Romans they appointed ten men who were to collect or recall all former laws, and to set forth those twelve tables so much of all men commended. The Athenians likewise appointed six for that purpose; and Lewis the ninth, king of France, did the like in reforming his laws.'*

* Bacon's Works, vol. 16, note (B. B.)

In the same session, Bacon signalized himself by his opposition to the *immediate** payment of a double subsidy, to the grant of which the House had assented, alleging that the 'poor men's rent is such as they are not able to yield it, and that the gentlemen must sell their plate, and farmers their brass pots, ere this will be paid;' 'and for us,' he added, 'we are here to search the wounds of the realm, and not to skin them over.' The Queen, incensed at this unusual freedom of speech, signified her displeasure in a way not to be mistaken; and it appears to have been thought that Bacon was endeavouring

* Writing to the lord Treasurer, who had told Bacon that 'her majesty was somewhat gravelled, upon the offence she took at his speech in parliament,' he says, 'It is not unknown to your good lordship, that I was the first of the ordinary sort of the lower House that spake for the subsidy; and that which I after spake in difference, was but in circumstance of *time*, which methinks was no great matter, *since there is variety allowed in counsel, as a discord in music, to make it more perfect.*'—Works, vol. 12, p. 3.

to ingratiate himself with the people,—a deadly political sin in those days of high prerogative. This, however, he denied. In a letter to the lord Keeper, (sir John Puckering,) he said, 'It is a great grief unto me, joined with marvel, that her majesty should retain an hard conceit of my speeches in Parliament. It might please her sacred majesty to think what my end should be in those speeches, if it were not duty, and duty alone. I am not so simple, but I know the common beaten way to please. And whereas popularity hath been objected, I muse what care I should take to please many, that take a course of life to deal with few.'* So, in a letter to the lord Treasurer, he says, 'I was sorry to find, by your lordship's speech yesterday, that my last speech in Parliament, delivered in discharge of my conscience, my duty to God, her majesty, and my country, was offensive; if it were misreported, I would

* Bacon's Works, vol. 12, p. 275.

be glad to attend your lordship to discover anything I said not; if it were misconstrued, I would be glad to expound my words, to exclude any sense I meant not; if my heart be misjudged by imputation of popularity or opposition, I have great wrong, and the greater, because the manner of my speech did most evidently show that I spake only to satisfy my conscience. It is very true, that from the beginning, whatsoever was a double subsidy I did wish might, for precedent's sake, appear to be extraordinary, and for discontent's sake, might not have been levied upon the poorer sort.'*

Notwithstanding this sharp reproof of the court, Bacon continued to take an active part in the Parliamentary debates, rapidly acquiring a high reputation as an eloquent and convincing speaker.

'There happened in my time,' said Ben Jonson,† 'one noble speaker, who was full

* Bacon's Works, vol. 12, p. 28.

† 'O rare Ben Jonson!'

of gravity in his speaking: his language, where he could spare or pass by a jest, was nobly censorious. No man ever spake more neatly, more pressly, more weightily, or suffered less emptiness, less idleness in what he uttered: no member of his speech but consisted of its own graces. His hearers could not cough or look aside from him without loss: he commanded when he spoke, and had his judges angry and pleased at his devotion. No man had their affections more in his power: the fear of every man that heard him was lest he should make an end.'

'His look
Drew audience and attention still as night
Or summer's noon-tide air.'*

There is reason to believe, that this manly speech about the subsidy, and the opinion that Bacon was rather a man of wit and knowledge than a profound lawyer, retarded,

* Milton.

for a time, his further advancement; for when the Solicitorship became vacant, by the appointment of sir Edward Coke to the office of Attorney-General, not all the influence of Essex,* backed, though it were, with 'the wishes of all men,' could induce the Queen, notwithstanding an already implied promise, to promote the friend of her favourite to the vacant place. 'Her majesty,' said Bacon, 'had by set speech more than once assured me of her intention to call me to her service; which I could not understand but of the place I had been named to, (the Solicitor's.) And now, whether "invidas homo hoc fecit," or whether my matter must be an appendix to my lord of Essex's suit, or whether her majesty, pretending to prove my ability, meaneth

* It is easy to perceive from lord Essex's letters on this subject, that the Queen, conscious of the influence that her favourite had over her, was determined, on this occasion, to show the proud spirit of her father, and resist the suit. See Note (B.)

but to take advantage of some errors, which, like enough, at one time or other I may commit, or what it is, but her majesty is not ready to dispatch it. This is a course to quench all good spirits, and to corrupt every man's nature; which will, I fear, much hurt her majesty's service in the end. I have been like a piece of stuff bespoken in the shop; and if her majesty will not take me, it may be, the selling by parcels may be more gainful. For to be like a child following a bird, which, when he is nearest, flieth away, and lighteth a little before, and then the child after it again, and so in infinitum, I am weary of it.'*

Disappointed, and, as he thought, disgraced,† by being thus neglected, he im-

* Bacon's Works, vol. 12, pp. 160, 161.

† 'Casting the worst of my fortune with an honourable friend that had long used me privately, I told his lordship (Essex) of this purpose of mine to travel, accompanying it with these very words, that upon her majesty's rejecting me with such circumstance, though

parted to his brother and lord Essex his design to leave England, and 'so sing a mass of requiem abroad.'* This reaching the ears of the Queen, greatly incensed her majesty; who, refusing to admit him to an audience, with an oath declared, that, if he continued in this manner, she would seek all England for a solicitor rather than take him; yea, she would send for Heuston and Coventry, as if, said Bacon, she would swear them both.†

my heart might be good, yet mine eyes would be sore, that I should take no pleasure to look upon my friends; for that I was not an impudent man that could face out a disgrace; and that I hoped her majesty would not be offended, that, not able to endure the sun, I fled into the shade.'—Bacon's Works, vol. 13, p. 85. It appears from the same letter that this design of going abroad, which Bacon intended to keep secret till her majesty had made a Solicitor, was disclosed by lord Essex.

* Bacon's Works, vol. 13, p. 84.

† Ib. 83. 'Again she entereth into it,' says Bacon, 'that she never deals so with any as with me, (*in hoc erratum non est.*) She hath pulled me over the bar,

At this time the University of Cambridge, appreciating his great and various endowments, conferred upon him* the degree of Master of Arts; and Bacon, abandoning his design of travelling, now meditated a retreat from an ungrateful court into the lettered seclusion of college. 'My nature,'—it is thus that he writes to his best of friends, lord Essex,—'my nature can take no evil ply; but I will, by God's assistance, with this disgrace of my fortune, and yet with that comfort of the good opinion of so many honourable and worthy persons, retire myself with a couple of men to Cambridge, and there spend my life in my studies and contemplations, without looking back.'†

(*note the words, for they cannot be her own,*) she hath used me in her greatest causes. But this is Essex, and she is more angry with him than with me.'—Letter to his brother 'Antony,' vol. 13, p. 83.

* July 27th, 1594.

† Bacon's Works, vol 13, p. 77. Writing to his uncle, the lord Treasurer Burleigh, he says, 'If your lordship will not carry me on, I will not do as Anax-

These contemplations were as vast as his civil ends were moderate; 'for I have taken,' he says, 'all knowledge to be my province, and if I could purge it of two sorts of rovers, whereof the one with frivolous disputations, confutations, and verbosities; the other with blind experiments and auricular traditions and impostures, hath committed so many spoils; I hope I should bring in industrious observations, grounded conclusions, and profitable inventions and discoveries, the best state of that province. This, whether it be curiosity or vain glory, or nature, or, if one take it favourably, philanthropia, *is so fixed in my mind, as it cannot be removed.*'* I

agoras did, who reduced himself with contemplation into voluntary poverty; but this I will do: I will sell the inheritance that I have, and purchase some lease of quick revenue, or some office of gain, that shall be executed by deputy, and so give over all care of service, and become some sorry book-maker, or a true pioneer in that mine of truth, which, he said, lay so deep.'—Bacon's Works, vol. 12, p. 6.

* Letter to lord Burleigh, vol. 12, pp. 5, 6.

sought for office, he adds, because I see that 'place of any reasonable countenance doth bring commandment of more wits than of a man's own, which is the thing I greatly affect.' He well knew, that though the coin may be gold, yet 'tis the king's image that gives it currency.

'After the Queen,'—we adopt Bacon's own narrative,—'had denied me the solicitor's place, for the which his lordship, the earl of Essex, had been a long and earnest suitor on my behalf, it pleased him to come to me from Richmond to Twickenham Park, and brake with me and said,—"Mr. Bacon, the Queen hath denied me the place for you, and hath placed another;* I know you are the least part of your own matter, but you

* Mr. Serjeant Fleming was appointed Solicitor-General on the 5th November, 1596. In his Orig. Jurid. p. 140, Dugdale gives a copy of the order by which the Queen, out of her especial grace and mere motion, discharges Thomas Fleming from the state and degree of serjeant at law.

fare ill because you have chosen me for your mean and dependence; *you have spent your time and thoughts in my matters;* I die," these were his very words, "if I do not somewhat towards your fortune, you shall not deny to accept a piece of land which I will bestow upon you." My answer, I remember, was, that for my fortune it was no great matter, but that his lordship's offer made me call to mind what was wont to be said, when I was in France, of the duke of Guise, that he was the greatest usurer in France, because he had turned all his estate into obligations; meaning, that he had left himself nothing, but only had bound numbers of persons to him. "Now, my lord, said I, I would not have you imitate his course, nor turn your estate thus by great gifts into obligations, for you will find many bad debtors." He bade me take no care for that, and pressed it, whereupon I said, "My lord, I see I must be your homager, and hold land of your gift; but do you know

the manner of doing homage in law? Always it is with a saving of his faith to the king and his other lords; and therefore, my lord, said I, I can be no more yours than I was, and it must be with the ancient savings; and if I grow to be a rich man, you will give me leave to give it back again to some of your unrewarded followers."' *

Touched, perhaps, with the generosity or gratitude of his friend, or hoping still for courtly favour, Bacon now abandoned his second scheme of retirement, and applied himself, as it appears, with increased vigour, to the study and practice of the law. It was about this period of his life, that Bacon composed his treatise on the Elements of the Common Law, to which he prefixed a dedication to the Queen.† This tract,

* Bacon's Works, vol. 6, pp. 249, 250.

† It was published in 1630, with the following title:—'*The Common Lawes of England, branched into a double tract; the one containing a collection of some principall Rules and Maximes of the Common Law, and their*

it has been thought,* was written to convince Elizabeth, that the author was not so shallow a lawyer as Cecil or Coke had represented him to be: but if this was his design, why did he not publish it? The truth seems to be, that he hesitated to give to the world what he himself considered an unfinished work. In his proposition to king James, for compiling and amending the law, he speaks of a treatise 'de regulis juris,' as of all things the most important to the health and good institutions of any laws, being, like the ballast of a ship, to keep all upright and stable; 'but I have seen,' he says, 'little in this kind, either in our law or other laws, that satisfieth me. The naked rule or maxim doth not the effect; it must

latitude and extent; explicated for the more facile Introduction of such as are studiously addicted to that noble Profession: the other, the Use of the Common Law, for the preservation of our Persons, Goods, and Good Names, according to the Lawes and Customes of this land.'

* D'Israeli's Curiosities of Literature, vol. 6, p. 111.

be made useful by good differences, ampliations, and limitations, warranted by good authorities, and this not by raising up of quotations and references, but by discourse and deducement in a just tractate.' 'In this,' he adds, evidently alluding to his Maxims, 'I have travelled myself, at the first more cursorily, since with more diligence, and will go on with it.'*

The generalizing character of Bacon's mind,—that habit of always contemplating particulars in their principles, and principles in their particulars, which he had in so eminent a degree, appears not only in his great philosophical works, but even in this his first Law Tract.

It is obvious, that the subject of this trea-

* Bacon's Works, vol. 5, p. 350. 'I am in good hope,' he adds, though in this he was mistaken, 'that when sir Edward Coke's Reports and my rules and decisions shall come to posterity, there will be, whatsoever is now thought, question, who was the greatest lawyer?'

tise was too technical to admit of that 'fusion of imagination with reason'* which characterizes his principal works. In the Preface, however, Bacon's genius displays itself in a fine piece of composition, full of those noble thoughts which at once stamp the author as the intellectual sovereign of his age. It is much too long for our limits, and, as Fuller said of John Huss's notable speech, 'it is all so excellent, that compendium would be dispendium thereof.'†

Although at one time popular, this work

* Sir James Mackintosh, Life of sir Thomas More, p. 1,—the most finished and beautiful piece of biography, (with the exception of Mr. Southey's Life of Nelson,) which has been published in modern times. It is to be regretted, that sir James Mackintosh has not yet met with a suitable biographer. We know that whilst in India he drew up a short memoir of himself:—why is this not published?

† Fuller's Abel Redevivus, p. 18. 'Fuller,' said the late Charles Lamb to one of the friends of the author, 'had a language of his own. His was not fine writing or good English, &c.;—nothing of the sort. Sir, *he wrote in wit!*'

is now held in little or no esteem, principally, no doubt, on account of its not being upon a level with the present state of our jurisprudence. Since the time of Bacon, British industry and enterprise, by opening sources of wealth and commerce unimagined before, have multiplied the relations of civil life, and necessarily originated innumerable usages, which the judges and the legislature have, from time to time, incorporated into our legal system. So long, indeed, as society continues to advance, the science of jurisprudence cannot remain stationary;—the one involves the other.*

But if the substance of lord Bacon's work on the Elements of the Law has thus become defective, the plan of it deserves, we think, attention, as an excellent model,

* See Von Savigny's Vocation of our Age for Legislation and Jurisprudence, in which this subject is developed with the author's wonted ingenuity and erudition. He again adverts to it in the opening of his History of the Roman Law. See also Jackson's Four Ages, p. 46.

which any future writer of a work auxiliary to the study of the law will do well to consult, if not pursue.*

In 1597, he published a volume of his 'Essays,' in order, as it appears, to prevent the printing of a surreptitious copy which had got abroad, likening himself to one who has an orchard ill-neighboured, that gathers his fruit before it is ripe, to prevent stealing. 'I disliked,' he says, in a letter to his brother, 'now to put them out, because they will be like the late newe halfe-pence, which, though the silver were good, yet the pieces were small. But since they would not stay with their master, but would needs travel abroad, I have preferred them to you, that are next myself, dedicating them, such as they are, to our love, in the depth whereof, I assure you, I sometimes wish your infirmities translated upon my selfe,

* The late Professor Park meditated a course of lectures on the maxims of the law, perhaps after lord Bacon's plan.

that her majesty might have the service of so active and able a mind, and I might be, with excuse, confined to these contemplations and studies, for which I am fittest.'

These writings he considered but as the recreations of his other studies,* and accordingly continued them, publishing in subsequent editions several additional Essays; and it is an interesting fact, that the one on Friendship was written at the request of his earliest and latest friend, Mr. Matthew.† Of all lord Bacon's works, this has ever been the most popular.‡

* 'I am not ignorant,' he says, 'that this kind of writings would, with less pains and assiduity, perhaps, yield more lustre and reputation to my name than the others I have in hand; but I judge the use a man should seek in publishing his writings before his death, to be but an untimely anticipation of that which is proper to follow, and not to go along with him.'—Bacon's Works, vol. 1, p. xvi.

† 'For the Essay of Friendship, while I took your speech of it for a cursory request, I took my promise for a compliment; but since you call for it, I shall perform it.'—Bacon's Works, vol. 12, p. 448.

‡ The first book published in Philadelphia partly

His observations are those of one who well knew the world, and they come home to men's business and bosoms. As Dugald Stewart justly remarks,* 'the novelty and depth of his reflections often receive a strong relief from the triteness of his subject.' There always was such definiteness in the author's conceptions, that his ideas are often worded with all the point and brevity of a proverb. He was so great a master of language, that Dr. Johnson declared,† that from his works alone an English

consisted, it is said, of Bacon's Essays. See Montagu's Life, note (3 I.)

* Introd. to Encyclopædia Britannica, p. 36.

† 'He told me that Bacon was a favourite author with him; but he had never read his works till he was compiling the English Dictionary, in which, he said, I might see Bacon very often quoted. Mr. Seward recollects his having mentioned, that a dictionary of the English language might be compiled from Bacon's writings alone, and that he had once an intention of giving an edition of Bacon, at least of his English works, and writing the life of that great man.'—Boswell, vol. 3, p. 212, sixth edition. Speaking of Bacon's Essays, Dr. Johnson, on one occasion, observed, 'Their

Dictionary might be compiled. His style is axiomatic. His sentences were not composed, but *cast*,—and cast in gold.

Soon after the publication of his Essays, Bacon, hoping, no doubt, to better his fortune, endeavoured to unite himself in marriage with the rich lady Hatton. Writing to lord Essex, he tells him, that this attempt, *in genere œconomico*, touching his fortune, was, *in genere politico*, blown contrary by certain cross winds; and he begged his friend to use his influence with the lady and her parents. Happily, however, for Bacon, his suit was rejected: a few months afterwards the lady Hatton married sir Edward Coke, and, by her haughty and intemperate conduct, deeply

excellence and their value consist in their being observations of a strong mind operating upon life, and, in consequence, you find there what you seldom find in any other works.'—Malone's edition of sir Joshua Reynolds's Discourses, xxviii.

embittered his life.* A curious circumstance, connected with this marriage, deserves to be noticed. Having been illegally solemnized in a private house, without the license of the Archbishop, (Whitgift,) proceedings were instituted in the Ecclesiastical Court against all the parties concerned, including even lord Burleigh. Strange to say, the penalties were remitted on the ground that sir Edward Coke had acted in ignorance of the law!

In the year 1600, Bacon was chosen Double Reader,† and on this occasion delivered his celebrated Reading on the Sta-

* See D'Israeli's Curiosities of Literature, vol. 5, p. 1, where he gives some singular details of Coke's domestic history.

† Formerly it was a custom in the Four Inns of Court for one of the puisne Benchers to deliver a 'Reading' yearly, in summer vacation, and for one of the Benchers who had 'read' before, to read again in Lent vacation; hence he was commonly called Lent or Double Reader (Duplex Lector.)—Dugdale's Orig. Jurid. 144; and see Preface to 3 Coke's Reports, xix.

tute of Uses,—a reading which one of our ablest lawyers considered as very profound, showing that the author had the clearest conception of this most abstruse part of the law.*

He begins by observing, that 'if my invention or judgment be too barren or too weak, yet, by the benefit of other arts, I did hope to dispose or digest the authorities and opinions which are in cases of uses, in such order and method, as they should take light from one another, though they took no light from me;' and then proceeds to say, that 'my meaning is to revive and recontinue the ancient form of reading, being of less ostentation and more fruit than the manner lately accustomed; for the use then was, substantially to expound the statutes by grounds and diversities; as you shall find the reading still to run upon cases of like law and contrary law; whereof the one in-

* Mr. Hargrave's note, Coke upon Littleton, 13 a n. 2.

cludes the learning of a ground, the other the learning of a difference; and not to stir conceits and subtle doubts, or to contrive a multitude of tedious and intricate cases, whereof all, saving one, are buried, and the greater part of that one case which is taken is commonly nothing to the matter in hand; but my labour shall be in the ancient course, to open the law upon doubts, and not to open doubts upon the law.' He then enters upon an examination of the statute, treating, in the first place, of the nature and definition of a use, its inception and progression before the statute, and then of uses since the statute, here rigidly analysing the act. 'I would wish all readers,' he adds, 'that expound statutes, to do as scholars are willed to do, that is, first to seek out the principal verb; that is, to note and single out the material words whereupon this statute is framed; for there are, in every statute, certain words which are veins where the life and blood of the

statute cometh, and where all doubts do arise and issue forth, and all the rest of the words are but *literæ mortuæ*, fulfilling words.' He then expounds the law as to raising and executing uses, and with this discussion the Reading, as published, concludes, though it appears, from his distribution of the subject in the outset, and indeed from his own words, that some part of it 'he thought good to reserve and not to publish.' *

In the year 1600, Essex, the early friend of Bacon, and the ill-fated favourite of Elizabeth, was brought to trial, charged with the crime of high treason. His story is too well known to justify any account of it in this place, and we advert to it on the ground only of its connection with Bacon, who incurred much obloquy as counsel for the crown. 'My life,' said he, 'hath been threatened, and my name libelled, which I

* Bacon's Works, vol. 13, p. 315.

count an honour; but these are the practices of those whose despairs are dangerous, but yet not so dangerous as their hopes. For my part, I have deserved better than to have my name objected to envy, or my life to a ruffian's violence; but thank God, I have the privy coat of a good conscience, and have a good while since put off any fearful care of life, or the accidents of life.'*

The truth is, the people, strongly attached to Essex, who was endowed with many noble and popular virtues, falsely imagined that Bacon had urged on the ruin of the fallen favourite;† whereas, as it now appears, he

* Bacon's Works, vol. 12, pp. 169, 172.

† 'There is shaped,' said Bacon, in a letter to lord Hen. Howard, 'a tale in London's forge that beateth apace at this time, that I should deliver opinion to the Queen in my lord of Essex's cause; first, that it was premunire, and now last that it was high treason; and this opinion to be in opposition and encounter of the lord Chief Justice's opinion and the Attorney-General's. My lord, (I thank God,) my wit serveth me not to deliver any opinion to the Queen which my sto-

had struggled, directly and indirectly, to restore him to favour, until the Earl, by his desperate and treasonable acts, perilling the crown and the peace of the country, endeavoured to light up a civil war.*

This circumstance, which ought not to be overlooked in estimating the character of Bacon, is passed over with a sneer by a recent author, who hesitates not, on the ground of Bacon's alleged ingratitude, to brand him as a 'criminal.' Duly estimating such sensibility, but regretting its misdirection, we will venture, (we hope without offence,) to suggest, that it consists not either with the dignity or the truth of history, to allow the principles or prejudices of party to predominate over the mind of the historian;

mach serveth me not to maintain, one and the same conscience of duty guiding and fortifying me. But the untruth of this fable God and my sovereign can witness, and there I leave it, knowing no more remedy against lies than others do against libels.'—Bacon's Works, vol. 12, p. 171.

* See Bacon's Works, vol. 12, p. 172; vol. 6, p. 245.

and that he has a far higher aim than that of amusing the vulgar reader, by playing with peers and prelates, princes and great men, as if they were mere nine-pins,—set up to be knocked down.

Although enjoying the favour or rather trust of Elizabeth, Bacon was ever a needy man;* and at the death of the Queen, his affairs were much embarrassed. 'My good old mistress,' he says, in one of his letters,

* In September, 1598, about five years before the death of Elizabeth, Bacon was in so destitute a condition, that one Sympson, a goldsmith, living in Lombard Street, 'a man noted much for extremities and stoutness upon his purse,' arrested him whilst returning from the Tower, on the Queen's business, for a debt of three hundred pounds; and but for the intervention of Sheriff More, who 'gently recommended him to a handsome house in Coleman Street,' he would immediately have been carried to prison. From the letters which he wrote to the lord Keeper Egerton and sir Thomas Cecil, whilst in custody in Coleman Street, it appears that the goldsmith had treated his creditor with cruel harshness.—Bacon's Works, vol. 12, pp. 275-277. Sir Michael Hickes and Mr. Henry Maynard seem to have been among Bacon's most useful friends.—Ib. pp. 476, 478, 479.

'was wont to call me her watch-candle, because it pleased her to say I did continually burn; and yet she suffered me to waste almost to nothing.'* True it is, the Queen, at the solicitation of the lord Treasurer, though with vehement opposition, had granted him the *reversion* of the registership of the Star-Chamber, but this, during Elizabeth's life, was 'unto me,' said

* Bacon's Works, vol. 12, p. 282. In another place he says, 'I do yet bear an extreme zeal to the memory of my old mistress, Queen Elizabeth, to whom I was rather bound for her trust than her favour.'—Ib. 73. In his unfinished History of Great Britain, he likewise notices the Queen's thrifty disposition. 'For Queen Elizabeth, although she had the use of many both virtues and demonstrations, that might draw and knit unto her the hearts of her people, yet nevertheless *carrying a hand restrained in gift, and strained in points of prerogative,* could not answer the votes either of servants or subjects to a full contentment; especially in her latter days, when the continuance of her reign, which extended to five-and-forty years, might discover in people their natural desire and inclination towards change; so that a new court and a new reign were not to many unwelcome.'—Bacon's Works, vol. 3, p. 425.

Bacon, 'like another man's ground reaching upon my house, which may mend my prospect, but it doth not fill my barn.'*

To relieve himself from his immediate difficulties, he sold part of the manor of Gorhambury, (near St. Albans, in Hertfordshire,) which had descended to him upon the death of his brother Anthony.

In a letter to lord Cecil, he writes, 'I shall be able, with selling the skirts of my living in Hertfordshire, to preserve the body, and to leave myself, being clearly out of debt, and having some money in my pocket, three hundred pounds land per annum, with a fair house, and the ground well timbered.' 'For my purpose or course,' he adds, 'I desire to meddle as little in the king's causes, his majesty now abounding in council; and to follow my private thrift and practice, and

* Bacon's Works, vol. 13, p. 87; and see vol. 12, pp. 159, 162. The office of counsel extraordinary to the Queen, seems to have been without salary.—Ib. 160; and see Note (A.)

to marry with some convenient advancement. For as for any ambition, I do assure your honour mine is quenched. In the Queen's, my excellent mistress's time, the *quorum* was small: her service was a kind of freehold, and it was a more solemn time. All those points agreed with my nature and judgment. My ambition now I shall only put upon my pen, whereby I shall be able to maintain memory and merit of the times succeeding.'* But this was not his only ambition. In Bacon's breast there were two antagonist principles struggling for a mastery. He was bred a public man; and as his nearest connections had been and were the principal ministers of the crown, it was natural for him to expect that public employment to which he had been dedicated, and to hope for some of its honours and rewards. He was conscious, however, that nature had fitted him rather for the pursuit of know-

* Bacon's Works, vol. 12, p. 278.

ledge than of power. He worshipped the one in secret, and delivered his public devotions to the other. Would that he had listened to the solemn charge of his great, but then almost unknown, contemporary!:—

> 'Fling away ambition;
> By that sin fell the angels; how can man then,
> The image of his Maker, hope to win by't?'

He was soon attached to the court of James. With his merits that monarch was already well acquainted, and Bacon had not been backward in offering his services. 'No man's fire,' said he, in a letter to the king, 'shall be more pure and fervent than mine; but how far forth it shall blaze out, that resteth in your majesty's employment.'

It is well known that, with the view of enriching an exhausted exchequer, James, at the very beginning of his reign, adopted the expedient of calling on all who held lands in chivalry, of the rental of forty pounds a-year, to receive knighthood, *or pay a composition.*

The same motive induced the king, (the fountain of honour!) at a future period, to bring the dignity of the peerage to the hammer, and even to create a new order of honour, that of baronets, so that this shadow of a shade might be bargained and sold. 'To know the British nobility,' said lord Bolingbroke, 'it was become almost necessary to have nomenclators, like those who attended the candidates at Rome, to tell them the names of the citizens. The jest went so far, that an advertisement of "an art to help weak memories to a competent knowledge of the names of the nobility" was pasted up at Paul's.'* We need not, therefore, be surprised that when, to gratify Miss Barnham,—'a handsome maiden to his

* Bolingbroke's Works, vol. 2, p. 337; and see Hallam's Constitutional History, vol. 1, p. 461. Hume seems to think that the knighting of so many gentlemen at the beginning of his reign is to be ascribed to the king's gratitude; (Hist. vol. 5, p. 3;) but Hallam maintains the opinion adopted in the text.

liking,'—whom he was about to marry, Bacon consented to have what he himself termed this divulged and almost prostituted title of knighthood, that he should earnestly implore Cecil so to provide, that the manner of conferring it might grace him, since the matter would not. 'I mean,' he says, 'that I might not be merely gregarious in a troop.'* On the 2nd July, 1603, Bacon was knighted at Whitehall.

In the following year James summoned his first Parliament, and Bacon, having been returned both for St. Albans and Ipswich, sat for the latter borough. He had formerly told the House that Parliament assembled only to make laws and grant monies:†—he now found that it had met to redress grievances. The various causes which, during the previous reign, had softened or subdued that spirit of reform which had long been silently fermenting in the minds

* Bacon's Works, vol. 12, p. 279. † Ante, p. 13.

of the great mass of the people, had now lost their power; and the nation, awakened by the dawning intelligence of the age, seemed to rouse herself, 'like a strong man after sleep.' The grievance and abuses of wardship, monopolies, and purveyance, were vehemently exclaimed against. Committees of inquiry were appointed, in which Bacon took an active part, and the Commons, so gracious was he with the house, entrusted him with their celebrated petition to the king against purveyors.*

About this period, Bacon, by a warrant of the king, was appointed his Counsel

* See Bacon's Works, vol. 6, p. 3, and Hallam's Constitutional History, vol. 1, p. 414. 'A spirit of liberty,' says Hume, 'had now taken possession of the House. The leading members, men of an independent genius and large views, began to regulate their opinions more by the future consequences which they foresaw, than by the former precedents which were set before them; and they less aspired at maintaining the ancient constitution than at establishing a new one, and a freer and a better.'—Hist. vol. 6, p. 45. Oxford ed.

learned extraordinary, an office which he had also held under Elizabeth; and, on the 25th of August, 1604, this appointment was confirmed by letters patent, which settled upon him for life a salary or fee of forty pounds a-year. By another patent of the same date, he received a yearly pension of sixty pounds for special services rendered by himself and his deceased brother Anthony to the king before he had ascended the English throne.*

In 1605, Bacon published his splendid treatise on the Proficiency and Advancement of Learning, but our account of this book we shall reserve until we come to speak of the Instauration, of which it forms the first part. In thus delivering to the world, as a detached work, what may be considered as the porch of the magnificent temple that he was engaged in rearing, Bacon foresaw

* Rymer's Fœdera, vol. 16, pp. 596, 597. See Note (A.)

that it would lessen, in some measure, the lustre of his labours, though not their use. 'I have this opinion,' he said,* 'that if I had sought my own commendation, it had been a much fitter course for me, to have done as gardeners use to do, by taking their seeds and slips, and rearing them first into plants, and so uttering them in pots, when they are in flower, and in their best state. But forasmuch as my end was merit of the state of learning, to my power, and not glory; and becasue my purpose was rather to excite other men's wits, than to magnify my own, I was desirous to prevent the incertainness of my own life and times, by uttering rather seeds than plants; nay, and further, as the proverb is, by sowing with the basket than with the hand.'

In the following year, (1606,) Bacon presented to the king 'Certain Considerations

* Bacon's Works, vol. 12, p. 80.

touching the Plantations in Ireland.'* The unhappy state of that country had long troubled the English government; and until the reign of James, Ireland had been unjustly and unwisely treated either as a colony or a conquered country, according to the dominant views of the ministers of the crown. It was the wise policy of James to adopt more liberal and pacific principles of government; and it redounds much to his honour, that of the forfeited lands in Ulster he set apart large estates for the endowment of places of education, now known by the

* Bacon's Works, vol. 5, p. 169. 'This island being another Britain, as Britain was said to be another world, is endowed with many dowries of nature, considering the fruitfulness of the soil, the ports, the rivers, the fishings, the quarries, the woods, and other materials; and especially the race and generation of men, valiant, hard, and active, as *it is not easy to find such confluence of commodities, if the hand of man did join with the hand of nature.*'—Ib. 174.

name of schools of royal foundation.* The territories of this great province which had escheated to the crown were, under the advice of lord Bacon, aided by the practical prudence and judgment of sir Arthur Chichester, effectually colonized; and from being the most barbarous, became the best cultivated of the Irish provinces.† To recommend this project, Bacon composed the tract we have just mentioned, in which, having considered the excellency, honour, policy, safety, and utility of the work, he then proceeds to point out the means by which it might be best effected.

We have already observed, that the prejudices of the Queen, the policy or jealousy of her ministers, and the enmity of Coke, had conspired to exclude Bacon from any promotion during the preceding reign.

* As to these schools, see Malte Brun, vol. 9, p. 557, English edition.

† Hallam's Constitutional History, vol. 3, p. 505.

These impediments ceased, in a great measure, upon the accession of the Scottish king, and the only remaining obstacle was removed by advancing Coke to the chief justiceship of the Common Pleas; thus opening the way for Bacon to the solicitorship, to which office he was appointed on the 25th of June, 1607.* These promotions put an end to that disgraceful rivalship which, ulcering the very hearts of these

* Writing to the earl of Salisbury, 'I am not ignorant,' said Bacon, 'how mean a thing I stand for in desiring to come into the solicitor's place; for I know well it is not the thing it hath been; time having wrought an alteration both in the profession and in that special place. Yet because I think it will increase my practice, and because *I have been voiced to it*, I would be glad it were done.'—Bacon's Works, vol 12, p. 63; and see his letter to the king, where he says, 'I would be glad now at last to be solicitor, chiefly because I think it will increase my practice, *wherein God blessing me a few years, I may mend my state, and so after fall to my studies and ease*, whereof one is requisite for my body, and the other serveth for my mind.'—Ib. 15.

distinguished men, would sometimes break out, even in court, into a feverish bitterness which nothing could subdue.

A specimen of Coke's unfortunate infirmity of temper, (we use the mildest term,—some would call it brutality,) will be found in the appended Notes.*

About two years after his appointment to the office of Solicitor-General, Bacon published his 'Wisdom of the Ancients,' in which, from the ancient allegories, he endeavours to elicit some implicit truths, contemplated, as he supposes, by the original authors of them, but concealed from the common eye. Perhaps it will be thought by the judicious reader, that Bacon often accepts his own reflections for those of another,—seeing more than is signified. 'The admirers of antiquity,' it is said, 'were charmed with this discourse, which seems expressly calculated to justify their

* See Note (C.) '

admiration; and, on the other hand, their opposites were no less pleased with a piece from which they thought they could demonstrate, that the sagacity of modern genius had found out much better meanings for the ancients than ever were meant by them.'*

In August, 1610, Bacon lost his accomplished mother. Writing, on the 27th of this month, to his kind friend, sir Michael Hickes, he says, 'It is but a wish, and not any ways to desire it to your trouble, but I heartily wish I had your company here at my mother's funeral, which I purpose on Thursday next, in the forenoon. I dare promise you a good sermon, to be made by Mr. Fenton, the preacher of Gray's Inn; for he never maketh other feast: I make none; but if I might have your company for two or three days at my house, I should pass

* Biog. Brit. art. Bacon, vol. 1, p. 383; Shaw's Preface to his Abridgment of Bacon's Works.

over this mournful occasion with more comfort.'* She was buried in St. Michael's Church, St. Albans.

About this time, Bacon was made one of the judges of the Knight-Marshal's Court, then lately erected by letters patent, within the verge of the king's palace; and, on the 9th of June, 1616, he was sworn one of the king's Privy Council, having, about three years before, succeeded sir Henry Hobart as Attorney-General,† upon which occasion he was permitted, contrary to all precedent, (so popular was he with the Commons,) to retain his seat in the lower House, although, by virtue of his office, an attendant upon the lords.‡

* Bacon's Works, vol. 12, p. 481. This letter and the affectionate allusion to his mother in his will, are the only notices of lady Bacon that a diligent search has discovered in the works of her illustrious son.

† Dugdale has erroneously stated, that Bacon was Attorney-General to Queen Elizabeth.—Orig. Jurid. p. 61.

‡ Rawley's Life.

While Attorney-General, he endeavoured to put an end to private duels, which were then very common; and the charge which he delivered in the Star-Chamber, upon informations exhibited against William Priest and Richard Wright, as principal and second, was so highly approved of by the lords of the council, that they directed it to be printed and published, 'as very meet and worthy to be remembered and made known unto the world.' He begins by considering the nature and greatness of the mischief of Duelling: 'it troubleth peace, it disfurnisheth war, it bringeth calamity upon private men, peril upon the state, and contempt upon the law.' 'Touching the causes of it,' he observes, 'the first motive, no doubt, is a false and erroneous imagination of honour and credit. But then the seed of this mischief being such, it is nourished by vain discourses, and green and unripe conceits. Hereunto may be added that men have almost lost the true notion and understanding

of fortitude and valour. For fortitude distinguisheth of the grounds of quarrels whether they be just; and not only so, but whether they be worthy, and setteth a better price upon men's lives than to bestow them idly; nay, it is weakness and disesteem of a man's self to put a man's life upon such liedger performances: a man's life is not to be trifled with; it is to be offered up and sacrificed to honourable services, public merits, good causes, and noble adventures. It is in expense of blood as it is in expense of money; it is no liberality to make a profusion of money upon every vain occasion, nor no more it is fortitude to make effusion of blood, except the cause be of worth.'

With the view of repressing this depraved custom of duelling,—this fond, false disguise or puppetry of honour, as Bacon called it,—he suggests that there should be declared a constant and settled resolution in the state to abolish it; that care should be taken that this evil be no more cockered, nor the hu-

mour of it fed; that all persons found guilty of this offence, should be punished by the Star-Chamber, and those of eminent quality, likewise, banished for some time from court.*

We have seen that, in the very first

* The Court, in this case, decreed, that the principal and second should be committed to the Fleet; the former to be fined five hundred pounds, and the latter, five hundred marks. They were also to make a public acknowledgment of the offence at the next assizes, and to show themselves penitent for the same.—Bacon's Works, vol. 6, p. 135. The subject of Duelling is discussed in a very lively and able manner by Dr. Mandeville, in the second dialogue of the second volume of his Fable of the Bees. Abp. Whately (a name never to be mentioned by us without respect,) supposes, in his Political Economy, p. 47, that this second volume (which is rather a scarce book,) had never been seen by Adam Smith, whose critique on the first has been so much admired. His Grace, however, overlooked the fact, that Adam Smith, in an excellent letter to the authors of the old Edinburgh Review of 1755, expressly says, 'that the *second volume* of the Fable of the Bees has given occasion to the system of M. Rousseau, in whom, however, the principles of the English author are softened, improved, and embellished,' &c. &c. See p. 130, second edition.

speech which he delivered in Parliament, Bacon called the attention of the House to the subject of Law Reform. He now prepared a proposition to his majesty for the reducing and recompiling of the law.* 'For the laws of England,' he eloquently said, 'if I shall speak my opinion of them, without partiality either to my profession or country, I hold them wise, just, and moderate laws; they give to God, they give to Cæsar, they give to the subject, what appertaineth. It is true they are as mixt as our language, compounded of British, Roman, Saxon, Danish, Norman customs; and surely as our language is thereby so much the richer, so our laws are likewise, by that mixture, the more complete. I have commended them for the *matter*, but they ask much amendment for the *form*, which to reduce and perfect, I hold to be one of the greatest dowries that can be conferred upon this kingdom.' He begins by combat-

* Bacon's Works, vol. 5, p. 337.

ing the various objections urged, or likely to be urged, against his proposal.

It may be objected, he observes, that it is a thing needless; that the law, as it now stands, is in good estate, comparable to any foreign law; and that it is not possible for the wit of man, in respect of the frailty thereof, to provide against the incertainties, or evasions, or omissions of law. 'For the comparison with foreign laws, it is in vain,' says Bacon, 'to speak of it, for men will never agree about it. Our lawyers will maintain for our municipal laws: civilians, scholars, travellers, will be of the other opinion.' But certain it is, he adds, that our laws are subject to great uncertainties, variety of opinion, delays, and evasions.

Again, it is said, that labour would be better bestowed in bringing the common law to a text-law, as the statutes are, and setting both of them down in method and by titles; in other words, in framing a Code. 'It is too long a business to debate,' replies

Bacon, 'whether *lex scripta, aut non scripta,* a text-law, or customs well registered, with received and approved grounds and maxims, and acts and resolutions judicial, from time to time duly entered and reported, be the better form of declaring and authorizing laws. Customs are laws written in living tables. In all sciences, they are the soundest that keep close to particulars; and sure I am, there are more doubts rise upon our statutes, which are a text-law, than upon the common law, which is no text-law.'

Again, it is objected, that it will turn the judges, counsellors, and students to school again, and impose upon all lawyers a new charge for books of law. 'For the former of these, touching the new labour, it is true,' says Bacon, 'that it would follow, if the law were new molded into a text-law; for then men must be new to begin, and that is one of the reasons for which I disallow that course. But, in the way that I shall now propound, the entire body and substance of law shall

remain, only discharged of idle and unprofitable or hurtful matter; and illustrated by order and other helps, towards the better understanding of it, and judgment thereof. For the latter, touching the new charge, it is not worthy the speaking of in a matter of so high importance; it might have been used of the new translation of the Bible, and such like works. Books must follow sciences, and not sciences books.'

Bacon then proceeds to develop his plan of reform. It consists of two parts,—the digest or recompiling of the common laws, and that of the statutes. In the first, three things are to be done:—

1. The compiling of a book 'De antiquitatibus juris.'

2. The reducing or perfecting of the course or corps of the common laws.

3. The composing of certain introductive and auxiliary books touching the study of the laws.

Having offered various judicious sugges-

tions on these several heads, he then adverts to the reforming and recompiling of the statute law, proposing that all obsolete acts should be expunged from the statute-book, the grievousness of the penalty in many of them mitigated, and lastly, that all concurrent statutes should be reduced to one clear and uniform law.*

The extreme severity of the criminal law long continued deeply to stain our jurisprudence. In the time of Bacon, the rack did not remain idle, and if suspected of treason, a man was questioned 'before torture, in torture, between torture, and after torture,' upon the authority of a mere warrant from the king or his council. That this was most repugnant to the opinions and the feel-

* From his letter to Bishop Andrews, it appears that Bacon had himself purposed to make a particular digest or recompilement of the laws; but this he laid aside, 'because it is a work of assistance, and that which he could not master by his own forces and pen.'—Bacon's Works, vol. 7, p. 116.

ings of Bacon, the general humanity of his character, apart from all other considerations, would alone induce us to suspect. His suggestion for mitigating the grievousness of the law, abundantly proves how much he was in advance of his age. The story about Haywarde's book, published in the reign of Elizabeth, is too illustrative of the humanity and wit of our author to be omitted, and we shall give it in his own graphic words: 'Her majesty,' said Bacon, 'being mightily incensed with that book which was dedicated to my lord of Essex, being a story of the first year of king Henry IV., thinking it a seditious prelude to put into the people's head boldness and faction, said, she had an opinion that there was treason in it, and asked me if I could not find any places in it that might be drawn within case of treason: whereto I answered; For treason surely I found none, but for felony very many; and when her majesty hastily asked me, wherein? I told her, the author had committed very

apparent theft; for he had taken most of the sentences of Cornelius Tacitus, and translated them into English, and put them into his text. And another time, when the Queen would not be persuaded that it was his writing whose name was to it, but that it had some more mischievous author; and said, with great indignation, that she would have him racked to disclose his author: I replied; Nay, madam, he is a doctor, never rack his person, but rack his style; let him have pen, ink, and paper, and help of books, and be enjoined to continue the story where it breaketh off, and I will undertake, by collating the styles, to judge whether he were the author or no.'*

Most of Bacon's enlightened suggestions, offered more than two hundred years ago, the present age has had the wisdom to adopt. Our ablest jurists have been, and now are, engaged in the noble task of pruning the

* Bacon's Works, vol. 6, p 259.

redundancies of our laws, of mitigating their severity, of reducing them to order and harmony. Already, says Mr. Warren, in his late excellent work on Law Studies, 'there has been a real reform,—a practical, searching, comprehensive reform of the common law; a shaking down of innumerable dead leaves and rotten branches; a cutting away of all the shoots of prurient vegetation, which served but to disfigure the tree, and to conceal and injure its fruit. Now you may see, in the common law, a tree, noble in its height and figure, sinewy in its branches, green in its garment, and goodly in its fruit. All who will may climb into its boughs, and "pluck the truth-fraught apple." '*

What a noble monument is this to the memory of Bacon, that he, unaided and alone, should at once have gained that high vantage-ground, towards which we have

* Warren's Introduction to Law Studies, p. 12.

been climbing, or rather creeping, since his death, for above two centuries, and have only just now reached!

The same fruitful and powerful mind which discoursed so eloquently and profoundly on the advancement and proficiency of learning, which expounded most luminously many of the subtlest doctrines of our law of real property, which projected the wisest plan for ameliorating the unhappy condition of Ireland, and grasped at once all the complexities of juridical reform, appears equally pre-eminent in the delicate and difficult task of detecting the causes of the controversies and abuses in the church, and of pointing out the best mode of ensuring its pacification and reform. The sectarian spirit which distracted the English church during the respective reigns of Elizabeth and James, was of a character which could not be overlooked by any one who had the good of his country at heart. Nor ought the experience of the past to be neglected

in such days as these of sects and schisms. Let us not idly reckon history as an old almanac, but rather listen to it as the voice of an ancient prophet, speaking of the age in which we live.

'It is very true,' said Bacon, 'that these ecclesiastical matters are things not appertaining to my profession; which I was not so inconsiderate but to object to myself; but finding that it is many times seen that a man that standeth off, and somewhat removed from a plot of ground, doth better survey it and discover it than those which are upon it, I thought it not impossible, but that I, as a looker on, might cast mine eyes upon some things which the actors themselves, especially some being interested, some led and addicted, some declared and engaged, did not or would not see.'*

* Bacon's Works, vol. 7, p. 62. The simplicity and sincerity of Bacon's affection for the church appear from that most solemn address which he was accustomed to utter in his devotions:—

'I have loved thy assemblies; I have mourned for

In his first tract on the Church, written in the reign of Elizabeth,* Bacon, after clearing the ground by some preliminary observations, begins by remarking that it cannot be denied that the imperfections in the conversation and government of those which have chief place in the church, have ever been

the divisions of thy church; I have delighted in the brightness of thy sanctuary. This vine, which thy right hand hath planted in this nation, I have ever prayed unto thee, that it might have the first and the latter rain; and that it might stretch her branches to the seas and to the floods. The state and bread of the poor and oppressed have been precious in mine eyes: I have hated all cruelty and hardness of heart: I have, though in a despised weed, procured the good of all men. If any have been my enemies, I thought not of them; neither hath the sun almost set upon my displeasure; but I have been as a dove, free from superfluity of maliciousness. Thy creatures have been my books, but thy scriptures much more. I have sought thee in the courts, fields, and gardens, but I have found thee in thy temples.'—Ib. p. 3.

* It is entitled, '*An Advertisement touching the Controversies of the Church of England.*'—Bacon's Works, vol 7, p. 28.

principal causes and motives of schisms and divisions. 'For whilst,' he says, 'the bishops and governors of the church continue full of knowledge and good works; whilst they feed the flock indeed; whilst they deal with the secular states in all liberty and resolution, according to the majesty of their calling, and the precious care of souls imposed upon them, so long the church is "situated," as it were, "upon a hill;" no man maketh question of it, or seeketh to depart from it; but when these virtues in the fathers and leaders of the church have lost their light, and that they wax worldly, lovers of themselves, and pleasers of men, then men begin to grope for the church as in the dark.'

The second occasion of controversies is the nature and humour of certain men: 'The church, says Bacon, 'never wanteth a kind of persons, which love the salutation of Rabbi, master; not in ceremony or compliment, but in an inward authority which they

seek over men's minds, in drawing them to depend upon their opinions, and to seek knowledge at their lips. These men are the true successors of Diotrephes, the lover of pre-eminence, and not lord bishops. Such spirits do light upon another sort of natures, which do adhere to these men; "quorum gloria in obsequio"; stiff followers, and such as zeal marvellously for those whom they have chosen for their masters. This latter sort, for the most part, are men of young years, and superficial understanding, carried away with partial respects of persons, or with the enticing appearance of godly names and pretences: few follow the things themselves, more the names of the things, and most the names of their masters.'*

The third occasion of controversies, 'I observe,' says Bacon, 'to be, an extreme

* 'Pauci res ipsas sequuntur, plures nomina rerum, plurimi nomina magistrorum.'

and unlimited detestation of some former heresy or corruption of the church, already acknowledged and convicted; and the fourth and last is the partial affectation and imitation of foreign churches.'

With the same luminous method, he then adverts to the growth of the controversies of the church, delivering many admirable observations in the same sober tone of philosophy. Condemning, on the one hand, a contentious retaining of custom, for a good husband, he says, is ever pruning in his vineyard or his field,—not unseasonably, indeed, not unskilfully, but lightly; he deprecates, on the other, all fiery and eager invectives, all uncivil and irreverent behaviour towards superiors, especially by those mercenary bands of libellers which impugn bishops and other ecclesiastical dignities to have the spoil of their endowments and livings. 'It is,' said Bacon, 'an intelligence between incendiaries and robbers;

the one to fire the house, the other to rifle it.' *

The second tract on the Church is entitled, 'Certain Considerations touching the better Pacification and Edification of the Church of England,' † and was dedicated to king James. It is much more extensive and complete than the one which we have just noticed, and equally distinguished for its temperate tone and depth of judgment. Having acutely remarked, that there are many who give opinion in these matters, as if they had not so much a desire to purge the evil from the good, as to countenance and protect the evil by the good, Bacon, with his vigorous intellect, at once grapples with the strongest arguments that have been

* See Sharpe's Essays, p. 90, where it is said, 'It is not only hard to distinguish between too little and too much, but between the good and evil intentions of the different reformers. One man calls out "Fire!" that he may save the house; another, that he may run away with the furniture.'

† Bacon's Works, vol. 7, p. 61.

urged in support of the two opinions, that it is against good policy to innovate in church matters, and that all reformation must be after one platform or model.

'It is true,' he says, 'that with all wise and moderate persons, custom and usage obtaineth that reverence, as it is sufficient matter to move them to make a stand, and to discover and take a view; but it is no warrant to guide and conduct them: a just ground, I say, it is of deliberation, but not of direction. But on the other side, who knoweth not, that time is truly compared to a stream, that carrieth down fresh and pure waters into that salt sea of corruption which environeth all human actions? And therefore, if a man shall not by his industry, virtue, and policy, as it were, with the oar row against the stream and inclination of time, all institutions and ordinances, be they never so pure, will corrupt and degenerate. But I would ask why the civil state should be purged and restored by good and whole-

some laws, made every third or fourth year, in Parliament assembled; devising remedies as fast as time breedeth mischief; and contrariwise, the ecclesiastical state should still continue upon the dregs of time. If it be said that there is a difference between civil causes and ecclesiastical, they may as well tell me that churches and chapels need no reparations, though castles and houses do.'

'There remaineth,' continues Bacon, 'yet an objection, rather of suspicion than of reason; and yet such as I think maketh a great impression in the minds of very wise and well-affected persons; which is, that if way be given to mutation, though it be in taking away abuses, yet it may so acquaint men with sweetness of change, as it will undermine the stability of even that which is sound and good. This had been a good and true allegation in the ancient constitutions and divisions between the people and the senate of Rome, where things were carried at the appetites of multitudes, which

can never keep within the compass of any moderation; but these things being with us to have an orderly passage, under approved judgment, it is surely a needless fear.'

For the second opinion, that there should be but one form of discipline in all churches, and *that* imposed by necessity of a commandment and prescript out of the word of God, Bacon confesses that, in revolving the Scriptures, he could never find any such thing, and contends that it was left open, like civil government, to be varied according to time, and place, and accidents.

He then examines the government of bishops, the liturgy, ceremonies, and subscription, offering also some admirable observations on a preaching ministry; but these topics we must pass over, in order to find room for his remarks on non-residents, pluralities, and church-maintenance:—

'For Non-residence,' says Bacon, 'except it be in case of necessary absence, it seemeth

an abuse drawn out of covetousness and sloth; for that men should live of the flock that they do not feed, or of the altar at which they do not serve, is a thing that can hardly receive just defence; and to exercise the office of a pastor, in matter of the word and doctrine, is a thing not warranted.'

'For Pluralities,' he says, 'in case the number of able ministers were sufficient, and the value of benefices were sufficient, then pluralities were in no sort tolerable. But we must take heed, we desire not contraries. For to desire that every parish should be furnished with a sufficient preacher, and to desire that pluralities be forthwith taken away, is to desire things contrary; considering, "de facto," there are not sufficient preachers for every parish: whereunto add likewise, that there is not sufficient living and maintenance in many parishes to maintain a preacher; and it maketh the impossibility yet much the greater. The remedies, "in rerum natura," are but three:—union, permutation, and supply. Union of

such benefices as have the living too small, and the parish not too great, and are adjacent. Permutation, to make benefices more compatible, though men be overruled to some loss in changing a better for a nearer. Supply, by stipendiary preachers, to be rewarded with some liberal stipends, to supply, as they may, such places which are unfurnished of sufficient pastors; as Queen Elizabeth, amongst other her gracious acts, did erect certain of them in Lancashire; towards which pensions, I see no reason but reading ministers, if they have rich benefices, should be charged.'

'Touching Church-maintenance,' continues Bacon, 'it is well to be weighed what is "jure divino," and what "jure positivo." It is a constitution of the divine law, from which human laws cannot derogate, that those that serve at the altar, should live at the altar; that those which dispense spiritual things should reap temporal things; of which it is also an appendix, that the proportion of this maintenance be not small

or necessitous, but plentiful and liberal. So then, that all the places and offices of the church be provided of such a dotation, that they may be maintained, according to their several degrees, is a constitution permanent and perpetual; but for particularity of the endowment, whether it should consist of tithes, or lands, or pensions, or mixt, might make a question of convenience, but no question of precise necessity. Again, that the case of the church, "de facto," is such, that there is want in the church of patrimony, is confessed. For the principal places, namely, the bishops' livings, are, in some particulars, not sufficient; and therefore, enforced to be supplied by toleration of commendams, things of themselves unfit, and ever held of no good report. And as for the benefices and pastors' places, it is manifest that very many of them are very weak and penurious. On the other side, that there was a time when the church was rather burdened with superfluity, than with

lack, that is likewise apparent; but it is long since; so as the fault was in others, the want redoundeth unto us. Again, that it were to be wished that impropriations were returned to the church, as the most proper and natural endowments thereof, is a thing likewise wherein men's judgments will not much vary. Nevertheless, that it is an impossibility to proceed now, either to their resumption or redemption, is as plain on the other side. For men are stated in them by the highest assurance of the kingdom, which is, act of parliament; and the value of them amounteth much above ten subsidies, and the restitution must of necessity pass their hands, in whose hands they are now in possession or interest.'

'But of these things which are manifestly true, to infer and ground some conclusions: First, in mine own opinion and sense, I must confess, let me speak it with reverence, that all the parliaments since 27 and 31 of Henry VIII., who gave away impropriations

from the church, seem to me to stand in a sort obnoxious, and obliged to God in conscience, to do somewhat for the church, to reduce the patrimony thereof to a competency. For since they have debarred Christ's wife of a great part of her dowry, it were reason they made her a competent jointure. Next to say, that impropriations should be only charged, that carrieth neither possibility nor reason. Not possibility, for the reasons touched before: not reason, because if it be conceived, that if any other person be charged, it should be a re-charge, or double charge, inasmuch as he payeth tithes already, that is a thing mistaken. For it must be remembered, that as the realm gave tithes to the church, so the realm since again hath given tithes away from the church unto the king, as they may give their eighth sheaf or ninth sheaf. And, therefore, the first gift being evacuated, it cannot go in defeasance or discharge of that perpetual bond, wherewith men are bound to

maintain God's ministers. 'And so we see in example, that divers godly and well-disposed persons, not impropriators, are content to increase their preachers' livings, which, though in law it be but a benevolence, yet before God it is a conscience. Farther, that impropriation should not be somewhat more deeply charged than other revenues of like value, methinks, cannot well be denied, both in regard of the ancient claim of the church, and the intention of the first giver: and again, because they have passed in valuation, between man and man, somewhat at the less rate, in regard of the said pretence or claim of the church in conscience before God.'

To these most temperate and judicious observations, we will add, that much of that confusion of thought, so often shown in conversation and in writing, when questions relating to property are discussed, principally arises from the ambiguity of the word 'rights.' This term is used sometimes in its

moral, and sometimes in its etymological, sense; and if we take the trouble to cast the arguments, or rather apparent arguments, that are often used on these subjects, into the syllogistic form, it will not unfrequently happen, that we shall detect the sophism which logicians call *fallacia equivocationis.* It will be found that the middle term is either used in one sense in the first proposition, and in a different one in the second, or that the terms of the conclusion are not taken in the same sense as in the premises. It will, therefore, be well to bear in mind, that whenever we speak of the rights of a subject *as* a subject, the word 'rights' is used in its etymological, not its moral, sense. Nothing more is signified by this term than, that a subject is entitled to what is *ordered* by the laws of his country. Ordinances of some kind are of course involved in the very idea of government, and government is but the machinery employed by the nation, for ensuring the security of

property, and the personal safety of the people. Private property seems to be nothing more than a mode of enjoying the public property, and depends entirely upon the law of the land. Instead of things being enjoyed in common, it is expedient that each individual should have a right of property independent of his fellow men, and the nature and extent of this right must necessarily be prescribed by the nation, through its organ, the government. An individual, or corporate body, therefore, as against another of the same nation, is entitled to an exclusive right of property, because it is so ordered by the law; as against a foreign people, occupancy, in the absence of any international territorial treaty, is the only foundation of title.

On the 7th March, 161$\frac{6}{7}$, Bacon was appointed lord Keeper of the Great Seal. Parliament had formerly ordained,* that the office of lord Keeper should not be distinct

* 28 Hen. III; and see Dugdale's Orig. Jurid. p. 36.

from that of Chancellor, but this law seems not to have been strictly observed. To put an end to the doubts as to the extent of the lord Keeper's authority, sir Nicholas Bacon obtained an act,* by which it was declared that he had the like place with the Chancellor. It may not be uninteresting to observe, that as lord Keeper, sir Francis Bacon, was allowed 'for his wages, dietts, robes, and liveries of himself and the masters of chancery,' five hundred and forty-two pounds, fifteen shillings, sterling yearly, and for his attendance in the Star-Chamber, after the rate of fifty pounds sterling every term. In addition, he received, annually, three score pounds for twelve tons of wine, and sixteen pounds for wax.†

On taking his place in chancery, 'there was,' says Bacon, 'much ado and a great deal of world, but this matter of pomp,

* 5 Eliz. cap. 18; Spelman's Gloss. verb. Cancellarius.

† Rymer's Fœdera, vol. 17, p. 1. The present salary of the Chancellor is fourteen thousand pounds, with a retiring pension of five thousand pounds.

which is heaven to some men, is hell to me, or purgatory at least.'* So assiduously did he engage in the duties of his office, (and it should be remembered, that his predecessor was an infirm old man,) that in a letter to Buckingham, dated the 8th of June, 1617, he was enabled to say, 'This day I have made even with the business of the kingdom for common justice; not one cause unheard; the lawyers drawn dry of all the motions they were to make; not one petition unanswered. And this, I think, could not be said in our age before. This I speak, not out of ostentation, but out of gladness, when I have done my duty. I know men think I cannot continue if I should thus oppress myself with business; but that account is made. *The duties of life are more than life;* and if I die now, I shall die before the world be weary of me, which, in these times, is somewhat rare.'†

* Bacon's Works, vol. 12, p. 244.

† Bacon's Works, vol. 12, p. 318.

With the view of ensuring a better and more regular administration of justice in chancery, Bacon promulgated a series of ordinances, which settled, in some measure, the then practice of the court; and it deserves to be noticed that, in this year, (1617,) he obtained a patent from the king, constituting two law reporters, with an annual salary of one hundred pounds each. The patent prescribed, that before publication, all the reports of adjudged cases should be first *reviewed* by the judges, particularly the lord Keeper. Recollecting the racking which the reports of sir Edward Coke underwent, in order to satisfy the scruples of the king, we cannot for a moment doubt, that the design of this reviewal was to guard against the publication of any thing tending to the prejudice of the prerogative royal.*

In 1618, Bacon was made lord Chancellor, created Baron of Verulam, and soon after-

* A copy of the patent is given in Rymer's Fœdera, vol. 17, p. 27; and see Bacon's Works, vol. 12, p. 344.

wards Viscount St. Alban,* which he reckoned his 'eighth rise or reach, a diapason in music, even a good number and accomb for a close.' And so, adds Bacon, I may without superstition be buried in St. Alban's habit or vestment.†

On the 22nd January, 1620, Bacon completed his sixtieth year, celebrating this day, in company with his friends, (among whom was Ben Jonson,) at York House, his birthplace. Upon this occasion the following verses were composed, and most likely recited by the poet himself:—

'Hail, happy genius of this ancient pile!
How comes it all things so about thee smile?
The fire, the wine, the men? and in the midst
Thou stand'st, as if some mystery thou didst.
Pardon, I read it in thy face; the day
For whose return, and many, all these pray,
And so do I. This is the sixtieth year
Since Bacon, and thy lord was born, and here:

* Rymer's Fœdera, vol. 17, pp. 55, 17, 279.
† Bacon's Works, vol. 12, p. 403.

Son to the grave wise keeper of the seal,
Fame and foundation of the English weal.
What then the father was, that since is he,
Now with a title more to the degree;
England's High Chancellor, the destin'd heir,
In his soft cradle, to his father's chair.
Whose even thread the fates spin round and full,
Out of their choicest and their richest wool.
'Tis a brave cause of joy, let it be known,
For 'twere a narrow gladness kept thine own.
Give me a deep crown'd bowl, that I may sing,
In raising him, the wisdom of my king.'

Despairing, at his advanced age, of ever completing the whole of the Instauration, Bacon, in October, 1620, published the *Novum Organum*. 'I number my days,' said he, 'and would have it saved.'

In grandeur of design, and in the greatness of its influence on the progress of science, the INSTAURATIO MAGNA stands alone in the literature of philosophy. The author had no pattern, and his work hath no parallel. It operated like the birth of a new sun; it divided the light from the

darkness, and disclosed the high and everlasting firmament of Truth. Bacon here surveyed the whole world of philosophy; he reported its deficiencies, rectified many of its errors, and even penetrated into regions before untrod. He did more: he revealed to man the grand secret of his strength:—*that by obeying nature, he might subdue her.* His zeal and constancy in the pursuit of knowledge, instead of abating with age, seem rather to have gathered strength:—

'Nor number, nor example with him wrought
To swerve from truth, or change his constant mind,
Though single.'

He knew himself by inward calling,—these are his own words,—to be fitter to hold a book than to play a part. 'I have led my life,' he said, 'in civil causes, for which I was not very fit by nature, and more unfit by the pre-occupation of my mind.*' Though

* Bacon's Works, vol. 12, p. 82; and see p. 44.

engaged in the weightiest affairs of the kingdom, he had, said one who knew him well,* so high an account of the truth of things, that no day could pass wherein he gave not liberty to his wise thoughts of looking upon the works of nature.

It is interesting to learn what the illustrious author himself thought of this the greatest of his works, and happily he has left us abundant means of doing so in his most interesting letters, which he carefully preserved.† It is of his Instauration that

* Mr. Matthew, Bacon's Works, vol. 12, p. 294.

† 'I find,' said lord Bacon, in a letter to Dr. Williams, bishop of Lincoln, 'I find that the ancients, (as Cicero, Demosthenes, Plinius Secundus, and others,) have preserved both their orations and epistles; in imitation of whom I have done the like to my own, which nevertheless I will not publish while I live; but I have been bold to bequeath them to your lordship, and Mr. Chancellor of the duchy. My speeches, perhaps, you will think fit to publish. The letters, many of them, touch too much upon late matters of state, to be published, yet I was willing they should not be lost.'—Bacon's Works, vol. 12, p. 202; and see

Bacon speaks, when he says, in a letter to his friend Matthew, 'I can assure you, that, though many things of great hope decay with youth, (and multitude of civil businesses is wont to diminish the price, though not the delight, of contemplations,) yet the proceeding in that work doth gain with me upon my affection and desire, both by years and businesses; and therefore I hope, even by this, that it is well pleasing to God, from whom, and to whom, all good moves.'* Writing, in 1610, to the same friend, he tells him, 'My great work goeth forward, and, after my manner, I alter even where I add; so that nothing is finished till all be finished.'† So assiduously did Bacon revise his Instauration, that, as we learn from Dr. Rawley, not fewer than twelve transcriptions

the bishop's reply, 'embracing the honour with all thankfulness, and the trust imposed upon him with all religion and devotion.'—Ib. 13, p. 42.

* Bacon's Works, vol. 12, p. 232.

† Ib. 29.

had been made. Besides his own frequent revisions, he submitted detached parts of his work to the criticism of his friends, well knowing, (as he told the bishop of Ely, upon sending him the 'Cogitata et Visa,') that when our minds judge by reflection on ourselves, they are more subject to error. 'And though, for the matter itself,' he added, 'my judgment be in some things fixed, and not accessible by any man's judgment that goeth not my way, yet even in those things the admonition of a friend may make me express myself diversely.' *

* Bacon's Works, vol. 12, p. 91. 'I am forced,' he says, in the same letter, 'to respect as well my times as the matter; for with me it is thus, and I think with all men in my case, if I bind myself to an argument, it loadeth my mind, but if I rid my mind of the present cogitation, it is rather a recreation: this hath put me into these miscellanies, which I propose to suppress, if God give me leave to write a just and perfect volume of philosophy, which I go on with, though slowly. I send not your lordship too much, lest it may glut you. Now, let me tell you what my desire is. If your lordship be so good now as when you were the good

To sir Thomas Bodley he likewise sent the same tract, and also the Advancement of Learning; but the celebrated founder of the Bodleian Library, (who built an ark, said Bacon, to save learning from deluge,*) was, like his equally or more famous predecessor, Appellicon of Teos, whom Strabo characterized as a lover of books rather than a philosopher,—φιλοβιβλος μαλλον η φιλοσοφος—† and he liked not the argument of the inductive philosophy. Playfully retorting upon his friend, 'If you be not of the lodgings chalked up,' said Bacon,‡ 'whereof I speak

dean of Westminster, my request to you is, that not by pricks, but by notes, you would mark unto me whatsoever shall seem unto you either not correct in the style, or harsh to credit and opinion, or inconvenient for the person of the writer, for no man can be judge and party. I would have come to your lordship, but that I am hastening to my house in the country, and so I commend your lordship to God's goodness.'

* Bacon's Works, vol. 12, p. 82.

† Strabo, xiii.

‡ Bacon's Works, vol. 12, p. 91, *or* vol. 13, p. 62. See sir Thomas Bodley's elaborate letter to Bacon, on

in my preface, I am but to pass by your door; but if I had you but a fortnight at Gorhambury, I would make you tell me another tale, or else I would add a *cogitation against libraries*, and be revenged on you that way.'

Lord Bacon also presented the Instauration to his old friend, Matthew, who, in his affectionate writing touching that work, (it is thus that Bacon delicately characterizes his friend's letter,) warned him not to tread too closely on the heels of divines, lest they should endeavour to hinder the popularity

receiving the Advancement of Learning, vol. 10, p. 506, and vol. 12, p. 83. The following passage from the *Novum Organum* will explain the curious phrase, *lodgings chalked up*:—'Dixit Borgia de expeditione Gallorum in Italiam, eos venisse cum cretâ in manibus ut diversoria notarent, non cum armis ut perrumperent; itidem et nostra ratio est, ut doctrina nostra animos idoneos et capaces subintret; confutationum enim nullus est usus, ubi de principiis et ipsis notionibus, atque etiam de formis demonstrationum dissentimus.'—Bacon's Works, vol. 9, p. 196; and see post, p. 129.

of his book. This, as might be expected, called forth a characteristic reply. "For your caution," said Bacon, 'for churchmen and church matters,—as for any impediment it might be to the applause and celebrity of my work, it moveth me not; but as it may hinder the fruit and good which may come of a quiet and calm passage to the good port to which it is bound, I hold it a just respect so as to fetch a fair wind I go not too far about; but troth is, I shall have no occasion to meet them in my way, except it be as they will needs confederate themselves with Aristotle, who, you know, is intemperately magnified with the schoolmen, and is also allied (as I take it) to the Jesuits by Faber, who was a companion of Loyola, and a great Aristotleian.' 'Myself,' he adds, 'am like the miller of Huntington, that was wont to pray for peace among the willows; for while the winds blew the wind-mills wrought, and the water-mill was less customed. So

I see that controversies of religion must hinder the advancement of sciences.' *

Long before the publication of his Instauration, Bacon had imparted the plan of it to bishop Andrews, who was his literary inquisitor; † and he told the king that about some such work he had been engaged near thirty years. ‡ Vanity, which is oftener the froth of folly than of genius, never inflated Bacon's mind,—never corrupted or hardened his heart by extinguishing, as it is wont to do, all the social and

* Bacon's Works, vol. 12, pp. 92, 93; and see vol. 13, p. 44.

† Bacon, writing to Mr. Matthew, tells him, 'I have now, at last, taught that child to go, at the swaddling whereof you were. My work touching the Proficiency and Advancement of Learning I have put into two books, whereof the former, which you saw, I cannot but account as a page of the latter. I have now published them both, whereof I thought it a small adventure to send you a copy, who have more right to it than any man, except bishop Andrews, who was my inquisitor.'—Bacon's Works, vol. 13, p. 62.

‡ Ib. vol. 12, p. 393.

best feelings of our nature in the greedy gulf of selfishness. He hearkened not to the voice of the charmer, charmed he never so wisely. Writing not for praise or glory, but for practice and the good of men, he contented himself, as he declared, to be 'a servant to posterity.' And again, he says, 'I must confess my desire to be, that my writings should not court the present time, or some few places, in such sorts as might make them either less general to persons, or less permanent to future ages.'*

However, though he sought not the applause of his own age, he found it. His domestic chaplain tells us that his fame sounded so loud in foreign parts, that many persons of distinguished rank crossed the seas to enjoy the pleasure of his conversation.† 'I have known, too,' he adds,

* Bacon's Works, vol. 12, p. 232.

† Rawley's Life; and see Bacon's Works, vol. 7, p. 115. In his late excellent Life of Galileo, p. 2, Mr. Drinkwater reiterates the oft repeated, but most erro-

'some of no mean parts that have professed to make use of their note-books, when they have arisen from his table.* In conversation, he was no dashing man, but ever a countenancer and fosterer of another man's parts; neither was he one that would appropriate the speech wholly to himself, or delight to

neous, statement, that Bacon, as a philosopher, attracted little attention among his contemporaries, and that they were but slightly affected by his precepts. Surely the convincing evidence collected by Professor Napier ought to set this question at rest for ever.—See his masterly Paper read before the Royal Society of Edinburgh, in 1818, and printed in its Transactions, vol. 8, pp. 373—425. In the sequel, we shall resume this subject.

* In Aubrey's anecdotes, we are told that 'Richard, Earl of Dorset, was a great admirer and friend of the lord Chancellor Bacon, and was wont to have sir Tho. Billingsley along with him, to remember and put down my lord's sayings at table.'—Letters from the Bodleian Library, &c. vol. 2, p. 221. Aubrey's anecdotes are very curious, and form the most important and interesting part of this collection. His knowledge of Bacon was principally derived from Hobbes, who had been intimate with both.

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outvie others. He would draw a man on to speak upon such a subject, as wherein he was peculiarly skilful and would delight to speak. And for himself, he contemned no man's observations, but would light his torch at any candle.' He willingly imparted his knowledge to all around him; and if there was any argument, it was for truth, not victory. He well knew, (what sir Thomas Brown has so happily illustrated,) that, 'in all disputes, so much as there is of passion, so much there is of nothing to the purpose; for then reason, like a bad hound, spends upon a false scent, and forsakes the question first started.'*

Though Bacon's moral and political† and legal writings would alone have been sufficient to perpetuate his name, yet he so

* Religio Medici, p. 35.

† 'If all lord Bacon's philosophy,' says Mr. Hallam, 'had never existed, there would be enough in his *political* writings to place him among the greatest men this country has produced.'—Constitutional History, vol. 1, p. 490, note.

surpassed all his contemporaries, and even himself, in his philosophy, that the Instauration must be considered as the principal pedestal of his fame.

The INSTAURATIO MAGNA was designed by its author to consist of six parts:—

I. Partitiones Scientiarum.

II. Novum Organum, sive Indicia de Interpretatione Naturæ.

III. Phænomena Universi, sive Historia Naturalis et Experimentalis ad condendam Philosophiam.

IV. Scala Intellectus.

V. Prodromi, sive Anticipationes Philosophiæ Secundæ.

VI. Philosophia secunda, sive Scientia Activa.

I. The *Advancement of Learning* contains the partition of sciences, and forms the first part of the Instauration. More extensive erudition, keener sagacity, loftier eloquence, and more profound reflections on

philosophy, were never assembled together in any work before or since. Like the tree of knowledge, it is laden with fruit both pleasant to the eye and grateful to the palate. Here, as in his Essays,* there is the same originality and clearness of thought, embodied in language often figurative, and always forcible, which expresses, with all the beauty and precision of the pencil, the very shade and shape of his ideas. His imagery is not made, but grows. Unlike the artificial flower which the disciples of Linnæus presented to their master, it is the fresh and racy production of nature. In closeness of thought and terseness of expression, Bacon may be compared to his friend Hobbes, the famous philosopher of Malmesbury.† It would be difficult, how-

* Ante, pp. 30—33.

† 'The lord Chancellor Bacon,' says Aubrey, 'loved to converse with him. He assisted his lordship in translating several of his essays into latin; one I well remember is that, "Of the Greatness of Cities," the

ever, to name two men of equal eminence whose characters were so fundamentally different,—who had so little in common. In the writings of Bacon, we see a broad, deep stream of thought, flowing from the fountain of reason, always beautifully arched with the iris of imagination. In the works of Hobbes there is profoundity of thought, but it does not flow; it is rather—so to speak—*pumped* out of his mind, and transmitted through cold, unimaginative paragraphs, with all the mechanical accuracy of a pipe. Bacon humbly

rest I have forgot. His lordship was a very contemplative person, and was wont to contemplate in his delicious walks at Gorhambury, and dictate to Mr. Bushell, or some other of his gentlemen, that attended him with ink and paper, ready to set down presently his thoughts. His lordship would often say that he better liked Mr. Hobbes's taking his thoughts, than any of the others, because he understood what he wrote, which the others not understanding, my lord would many times have a hard task to make sense of what they writ.'—Letters from the Bodleian Library, &c. vol. 2, p. 602, and see p. 222.

endeavoured to correct the false philosophy of his age, by teaching man to act as the servant and interpreter of nature; Hobbes arrogantly aimed at rearing, on a foundation of his own, a perfect system of moral and political science, 'counting it more honour to make a thing than to mend it.'* Bacon's ruling passion was a zeal for the advancement of knowledge; Hobbes sought for truth, but was blinded by the pride of paradox.

Fearing that our modern languages would, at one time or other, play the bankrupt with books,† Bacon applied to Dr. Playfer, professor of divinity in the University of Cambridge, who had a great reputation as an elegant scholar, to translate his *Advancement of Learning* into latin, then the general language of the learned; for since,

* Fuller's Sermon of Reform, p. 21. Ed. 1643.

† Letter to Mr. Matthew, vol. 12, p. 448. 'And since,' he adds, 'I have lost much time with this age, I would be glad, as God shall give me leave, to recover it with posterity.'

says Bacon, in a letter to the professor, 'I have only taken upon me to ring a bell, to call other wits together, (which is the meanest office,) it cannot but be consonant to my desire to have that bell heard as far as can be.' 'And since,' he continues, 'they are but sparks, which can work but upon matter prepared, I have the more reason to wish, that those sparks may fly abroad, that they may the better find, and light upon those minds and spirits which are apt to be kindled. And therefore, the privateness of the language considered wherein it is written, excluding so many readers, (as on the other side the obscurity of the argument, in many parts of it, excludeth many others;) I must account it a second birth of that work, if it might be translated into latin, without manifest loss of the sense and matter. For this purpose, I could not represent to myself any man, into whose hands I do more earnestly desire that work should fall, than yourself; for by that I have heard and read,

I know no man a greater master in commanding words to serve matter. Nevertheless I am not ignorant of the worth of your labours, whether such as your place and profession imposeth on you, or such as your own virtue may, upon your voluntary election, take in hand. But I can lay before you no other persuasions, than either the work itself may affect you with, or the honour of his majesty, to whom it is dedicated, or your particular inclination to myself; who as I never took so much comfort in any labours of my own, so I shall never acknowledge myself more obliged in any thing to the labour of another, than in that which shall assist this.' * Dr. Playfer readily undertook the task, but the specimen sent to Bacon being too polished and affected, he did not encourage him to proceed; and it is said, that he afterwards employed the pens of Mr. Herbert, Ben Jonson, and some

* Bacon's Works, vol. 12, p. 81.

other friends. 'It is a translation,' says Bacon, 'but almost enlarged into a new work. I had good helps for the language. I have been also mine own *index expurgatorius*, that it may be read in all places; for since my end of putting it into latin was to have it read every where, it had been an absurd contradiction to free it in the language, and to pen it up in the matter.'*

The *Advancement of Learning* opens with a noble defence of the dignity of knowledge against the discredits and disgraces which it had received from ignorance, but ignorance severally disguised; appearing sometime in the zeal and jealousy of divines; sometimes in the severity and arrogancy of politicians; and sometimes in the errors and imperfections of learned men themselves.†

* Letter to king James, vol. 12, p. 451. The copy presented to the king is still preserved in the royal library in the British Museum.

† Bacon's Works, vol. 2, p. 7.

Among various other erroneous opinions held by the divines of that day, the author notices the conceit, that too much knowledge inclines a man to atheism, and that the contemplation of second causes derogates from our dependence upon God. As for this, he says, 'It is good to ask the question which Job asked of his friends: "Will you lie for God, as one man will do for another, to gratify him?" For certain it is, that God worketh nothing in nature but by second causes; and if they would have it otherwise believed, it is mere imposture, as it were in favour towards God; and nothing else but to offer to the Author of Truth the unclean sacrifice of a lie.'

And as to too much knowledge producing scepticism, it is an assured truth, says Bacon, and a conclusion of experience, that though a superficial knowledge of philosophy may incline man to atheism, yet a further proceeding therein brings the mind back again to religion. If we dwell only on

second causes, which are next unto the senses, and advance no further; then this may induce some oblivion of the highest cause; but if we pass on, and see the dependence of causes, that universal harmony which exists in the laws of nature, we are irresistibly compelled to acknowledge the existence of a supreme creative power, presiding over the universe; and the blindest scepticism is unscaled. Since the time of Bacon, the result of every extensive generalization or law disclosed by the inductive logic of modern philosophy, has been to amplify and confirm this argument. *

Bacon next proceeds to state and refute the sophisms of politicians on the subject of learning. 'As for those particular seducements or indispositions of the mind for policy and government, which learning

* See the late work of a distinguished living philosopher,—Whewell's Astronomy and General Physics.

is pretended to insinuate; if it be granted that any such thing be, it must be remembered withal, that learning ministereth in every of them greater strength of medicine or remedy, than it offereth cause of indisposition or infirmity; for if, by a secret operation, it make men perplexed and irresolute, on the other side, by plain precept, it teacheth them where and upon what grounds to resolve; yea, and how to carry things in suspense without prejudice, till they resolve; if it make men positive and regular, it teacheth them what things are in their nature demonstrative, and what are conjectural; and as well the use of distinctions and exceptions, as the latitude of principles and rules. If it mislead by disproportion, or dissimilitude of examples, it teacheth men the force of circumstances, the errors of comparisons, and all the cautions of application; so that in all these it doth rectify more effectually than it can pervert.'

'And for the conceit,' continues Bacon, 'that learning should dispose men to leisure and privateness, and make men slothful; it were a strange thing if that, which accustometh the mind to a perpetual motion and agitation, should induce slothfulness; whereas, contrariwise, it may be truly affirmed, that no kind of men love business for itself, but those that are learned; for other persons love it for profit, as an hireling, that loves the work for the wages; or for honour, as because it beareth them up in the eyes of men, and refresheth their reputation, which otherwise would wear; or because it putteth them in mind of their fortune, and giveth them occasion to pleasure and displeasure; or because it exerciseth some faculty wherein they take pride, and so entertaineth them in good humour and pleasing conceits toward themselves; or because it advanceth any other their ends. So that, as it is said of untrue valours, that some men's valours are in the

eyes of them that look on; so such men's industries are in the eyes of others, or at least in regard of their own designments: only learned men love business, as an action according to nature, as agreeable to health of mind, as exercise is to health of body, taking pleasure in the action itself, and not in the purchase; so that of all men they are the most indefatigable, if it be towards any business which can hold or detain their mind.'

'And that learning should take up too much time or leisure; I answer,' says Bacon, 'the most active or busy man that hath been or can be, hath, no question, many vacant times of leisure, while he expecteth the tides and returns of business, (except he be either tedious and of no dispatch, or lightly and unworthily ambitious to meddle in things that may be better done by others:) and then the question is, but how those spaces and times of leisure shall be filled and spent; whether in pleasures or in studies;

as was well answered by Demosthenes to his adversary Æschines, that was a man given to pleasure, and told him, that his orations did smell of the lamp: "Indeed," said Demosthenes, "there is a great difference between the things that you and I do by lamp-light." So as no man need doubt that learning will expulse business; but rather it will keep and defend the possession of the mind against idleness and pleasure, which otherwise at unawares may enter, to the prejudice of both.'

'Again, for that other conceit, that learning should undermine the reverence of laws and government, it is assuredly a mere depravation and calumny, without all shadow of truth. For to say, that a blind custom of obedience should be a surer obligation than duty taught and understood, it is to affirm, that a blind man may tread surer by a guide than a seeing man can by a light. And it is without all controversy, that learning doth make the minds of men gentle, ge-

nerous, maniable, and pliant to government; whereas ignorance makes them churlish, thwarting, and mutinous: and the evidence of time doth clear this assertion, considering that the most barbarous, rude, and unlearned times, have been most subject to tumults, seditions, and changes.'

He then exposes, with consummate skill, the errors among learned men themselves, which commonly cleave the fastest, springing either from their fortune, their manners, or the nature of their studies. His observations on that distemper of learning, when men study words and not matter, show that he had the justest notions on a subject which afterwards exercised the gigantic intellect of Locke. 'How is it possible,' he asks, 'but this should have an operation to discredit learning, even with vulgar capacities, when they see learned men's works like the first letter of a patent or limned book, which, though it hath large flourishes, yet it is but a letter.' 'For the wit and

mind of man,' he adds, 'if it work upon matter, which is the contemplation of creatures of God, worketh according to the stuff, and is limited thereby; but if it work upon itself, as the spider worketh his web, then it is endless, and brings forth, indeed, cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit.'

Another error, he says, is an impatience of doubt, and haste to assertion without due suspension of judgment. 'For the two ways of contemplation are not unlike the two ways of action, commonly spoken of by the ancients; the one plain and smooth in the beginning, and in the end impassable; the other rough and troublesome in the extreme, but after a while fair and even: so it is in contemplations: if a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties.'

With the same sagacity he examines va-

rious other 'peccant humours' which have hindered the advancement of learning: but the greatest error of all the rest, he says, is the mistaking the true end of knowledge; 'for men have entered into a desire of learning and knowledge, sometimes upon a natural curiosity and inquisitive appetite; sometimes to entertain their minds with variety and delight; sometimes for ornament and reputation; and sometimes to enable them to victory of wit and contradiction; and most times for lucre and profession; and seldom sincerely to give a true account of their gift of reason, to the benefit and use of men: as if there were sought in knowledge a couch, whereupon to rest a searching and restless spirit; or a tarrasse, for a wandering and variable mind to walk up and down with a fair prospect; or a tower of state, for a proud mind to raise itself upon; or a fort or commanding ground, for strife or contention; or a shop, for profit or sale; and not a rich storehouse, for the glory of the Creator and the relief of man's estate.'

He then proceeds to weigh the dignity of knowledge in the balance with other things, to take the true value thereof by testimonies and arguments, divine and human; and with this the first book concludes.

The second book opens with an examination of the places of learning, the books of learning, and the persons of the learned, in which the author animadverts on various defects therein. The removing of these, he says, are for the most part "opera basilica," towards which the endeavours of a private man may be but as an image in a crossway, that may point at the way, but cannot go it. But the survey of learning may be set forward by private travel. 'Wherefore,' he adds, 'I will now attempt to make a general and faithful perambulation of learning, with an inquiry what parts thereof lie fresh and waste, and not improved and converted by the industry of man. In the handling and undertaking of which work, I am not ignorant what it is that I do now move and

attempt, nor insensible of mine own weakness to sustain my purpose: but my hope is, that if my extreme love to learning carry me too far, I may obtain the excuse of affection; for that it is not granted to man to love and to be wise. I shall be content,' he adds, 'that my labours be esteemed but as the better sort of wishes; for as it asketh some knowledge to demand a question not impertinent, so it requireth some sense to make a wish not absurd.'

In this grand survey, Bacon adopts a new arrangement of the sciences, classing all human knowledge relatively to the three intellectual faculties of memory, imagination, and reason; comprehending in the first of these divisions whatever is narrative or *History;* in the second, *Poetry;* and in the third, *Philosophy.*

1. *History* he distributes into natural, civil, ecclesiastical, and literary. In Bacon's time there did not exist any history of literature, representing the general state of learning from age to age; but foreseeing the great

utility of such a work, he, with his accustomed sagacity, not only suggested that a just story of learning should be written, but, with wonderful minuteness, delineated the plan of its composition. 'It should contain,' he said, 'the antiquities and originals of knowledges and their sects, their inventions, their traditions, their diverse administrations and managings, their flourishings, their oppositions, decays, depressions, oblivions, removes, with the causes and occasions of them, and all other events concerning learning, throughout the ages of the world.' 'The use and end of which work,' adds Bacon, 'I do not so much design for curiosity, or satisfaction of those that are the lovers of learning, but chiefly for a more serious and graver purpose, which is this, in a few words, that it will make learned men wise in the use and administration of learning.'

Natural History, he says, is of three sorts,—history of creatures, of marvels, and

of arts. As to the second, i. e., history of marvels, he at once rejects from it all fables and popular errors, of which it then principally consisted, truly observing, that 'if an untruth in nature be once on foot, what by reason of the neglect of examination, and countenance of antiquity, and what by reason of the use of the opinion in similitudes and ornaments of speech, it is never called down.' He suggests, however, that a substantial and severe collection of the heteroclites or irregulars of nature should be made, because it would enable us to correct the partiality of axioms and opinions, which are commonly framed upon common examples, and, by becoming familiar with the wonders of nature, we shall be led to discover the wonders of art; 'for,' says Bacon, 'it is no more but by following, and, as it were, *hounding* nature in her wanderings, to be able to lead her afterwards to the same place again.'

Under the second principal division, *i. e.*,

Civil History, he comprises Memorials, Perfect Histories, and Antiquities. Again, he divides Memorials into Commentaries and Registers, the one containing a bare account of events and actions, without adverting to the motives or designs, the counsels, the speeches, or the pretexts; the other being a 'mere collection of public acts, as decrees of council, judicial proceedings, declarations and letters of state, orations, and the like. As for epitomes, they are, says Bacon, 'the corruptions and moths of history, and deserve to be banished, as all men of sound judgment have confessed.'

Perfect history he distributes according to the object which it propounds or pretends to represent; for it represents either a time, a person, or an action. The first is called Chronicles, the second, Lives or Biography, and the third, Narratives.

Ecclesiastical history may be divided into the history of the church, of prophecy, and of providence. 'The first,' says Bacon,

'describeth the times of the "militant church," whether it be fluctuant, as the ark of Noah; or moveable, as the ark in the wilderness; or at rest, as the ark in the temple: that is, the state of the church in persecution, in remove, and in peace.' As to the history of prophecy, it consists of two relations, the prophecy and accomplishment. 'This is a work,' says Bacon, 'which I find deficient; but it is to be done with wisdom, sobriety, and reverence, or not at all.' History of providence is designed to show the correspondence which is between God's revealed will and his secret will. Having noticed what he calls the appendices to history, that is, orations, letters, and apophthegms, he concludes this subject by observing, that it is that part of learning which answers to memory, one of the cells, domiciles, or offices of the mind of man.

2. *Poetry*, which is justly referred to the province of imagination, Bacon considered as distinguished from Prose—not in respect of

matter, (as some French critics have since contended,) but of style; and it is evident that, in his opinion, Poetry is, strictly speaking, an imitative art, having the same relation to prose as dancing to walking, and singing to speaking.* His division of Poetry is into narrative, representative, and allusive or parabolical; the first being a mere imitation of history; the second, an image of actions as if they were present; and the third, being a narration applied only to express some special purpose or conceit; such as the fables of Æsop, and the brief sentences of the Seven.

'Let us now,' says Bacon, 'pass on to the judicial place or palace of the mind, which we are to approach and view with more reverence and attention.'

3. *Philosophy* being concerned with the

* Bacon's Works, vol. 2, pp. 119, 199. See Adam Smith's excellent essay '*Of the Nature of that Imitation which takes place in what are called the Imitative Arts,*' published in his Posthumous Works.

contemplations of man, which relate either to God, to nature, or to himself, Bacon, taking this triple character as the groundwork of his division, distributes this principal department of human knowledge into *Divine philosophy*, *Natural philosophy*, and *Human philosophy*.

Before entering, however, into any minute examination of their details, he suggests that one universal science, by the name of '*Philosophia Prima*,' should be formed; 'because,' says Bacon, with his usual felicity of illustration, 'the distributions and partitions of knowledge are not like several lines that meet in one angle, and so touch but in a point; but are like branches of a tree that meet in a stem, which hath a dimension and quantity of entireness and continuance, before it comes to discontinue and break itself into arms and boughs.' This primitive or summary philosophy, he suggests, should be a receptacle for all such profitable observations and axioms as fall not within the pro-

vince of any of the special parts of philosophy, but are of a higher stage, aptly comparing it to Berecyntia, the fruitful mother of so much heavenly issue,

Omnes cœlicolas, omnes supera alta tenentes. *

Divine Philosophy, or Natural Theology, as he also terms it, is justly defined to be that knowledge or rudiment of knowledge concerning God, which may be obtained by the contemplation of his creatures, being divine in respect of the object, and natural in respect of the light. The great end of such contemplations is to induce and enforce the acknowledgment of God, and to demonstrate his power, providence, and goodness. Having offered some admirable observations on the extreme prejudice which both religion and philosophy have received, and may receive, by being commixed together, as that which undoubtedly will make an hereti-

* Æneid, lib. vi., 788.

cal religion and fabulous philosophy,* he dismisses the subject of natural theology, and proceeds to the consideration of Natural Philosophy, reserving divinity or inspired theology for the last of all, 'as the haven and sabbath of all man's contemplations.'

As to *Natural Philosophy*, Bacon divides it into two parts,—the inquisition of causes, and the production of effects; speculative and operative; natural science and natural prudence. 'Now, although it be true,' he observes, 'and I know it well, that there is an intercourse between causes and effects, so that both these knowledges, speculative and operative, have a great connection between themselves, yet, because *all true and fruitful natural philosophy hath a double scale or ladder, ascendant and descendant; ascending from experiments to the invention of causes, and descending from causes to the invention of new experiments*, therefore I judge it

* Bacon's Works, vol. 2, pp. 128—130.

most requisite that these two parts be severally considered and handled.'

With respect to that part of Natural Philosophy which concerns the inquiry of causes, he suggests a new subdivision, grounded on the received distribution of causes, viz., Physique, which regards the material and efficient causes; and Metaphysique, which handles the formal and final causes.'*

As to the operative part of natural philosophy, or Natural Prudence, as Bacon calls it, he divides it into three parts,—experimental, philosophical, and magical; censuring the last, (natural magic,) as it then

* 'Physique, taking it according to the derivation, and not according to our idiom for medicine, is situate in a middle term or distance between Natural history and Metaphysique. For Natural history describeth the variety of things; Physique, the causes, but variable or respective causes; and Metaphysique, the fixed and constant.'—*Advancement of Learning*, Works, vol. 2. p. 135.

existed, as frivolous, full of superstitious conceits, and differing in truth of nature from such a knowledge as we require, as the story of king Arthur of Britain, or Hugh of Bordeaux, differs from Cæsar's Commentaries in truth of story.

'Thus,' says Bacon, in concluding his observations on the second principal branch of Philosophy, 'have I passed through natural philosophy, and the deficiencies thereof; wherein if I have differed from the ancient and received doctrines, and thereby shall move contradiction,—for my part, as I affect not to dissent, so I purpose not to contend. If it be truth,

"Non canimus surdis: respondent omnia sylvæ."*

The voice of nature will consent, whether the voice of man do or not. And as Alexander Borgia was wont to say of the expe-

* Bucol. Ecl. X, 1.

dition of the French for Naples, that they came with chalk in their hands to mark up their lodgings, and not with weapons to fight; so I like better that entry of truth which cometh peaceably, with chalk to mark up those minds which are capable to lodge and harbour it, than that which cometh with pugnacity and contention.' *

Human Philosophy is divided by Bacon into two parts:—the one considering man as an individual; the other, as living in society. The former embraces those sciences and arts which relate either to the body or the mind; and the latter comprehends all civil knowledge. Having suggested that human nature is itself deserving of being studied as a science, principally with the view of obtaining a knowledge of the influence which the mind and body exercise over each other, Bacon then proceeds to survey that department of knowledge which regard man's body, class-

* See ante, p. 95, note.

ing under this head those arts which relate to health, beauty, strength, and pleasure:—*viz.*, medicine, cosmetique, athletique, and the voluptuary art.

His observations on Medicine deserve particular attention. In habits of intimacy with the illustrious author of the 'Circuitus Sanguinis,'* (for Dr. Harvey was lord Bacon's friend and physician,) it is not improbable that this subject had formed with them a common topic of conversation; for

* 'I have heard Dr. Harvey say,' remarks Aubrey, 'that after his book of the Circulation of the Blood came out, he fell mightily in his practice; and it was believed by the vulgar that he was crack-brained; and all the physicians were against his opinion, and envyed him. With much ado, at last, in about twenty or thirty years time, it was received in all the Universities in the world; and, as Mr. Hobbes says in his book "De Corpore," "he is the only man, perhaps, that ever lived to see his own doctrine established in his lifetime." '—Letters from the Bodleian Library, &c., vol. 2, p. 383. It is remarkable, that, though Harvey esteemed Bacon for his wit and knowledge, yet he would not allow him to be a great philosopher, saying to Aubrey, 'he writes philosophy like a Lord Chancellor,' Ib. p. 381.

both were communicative, delighting, above all things, in an intercourse of thought. 'The variable composition of man's body,' says Bacon, 'hath made it as an instrument easy to distemper; and, therefore, the poets did well to conjoin music and medicine in Apollo; because the office of medicine is but to tune the curious harp of man's body, and to reduce it to harmony.' Owing to the difficulties of this art, much is left to conjecture; and thus it is that imposture, aided by the weakness and credulity of mankind, is enabled to maintain its ground. 'A mountebank or witch,' says Bacon, 'will sometimes be preferred to a learned physician.' And what is the consequence? 'Even this,' he adds, 'that physicians say to themselves, as Solomon expresseth it upon an higher occasion, "If it befal to me as befalleth to the fools, why should I labour to be more wise?"'

Among other judicious observations on this head, we may notice that he insists upon

the importance of studying *comparative* anatomy, — an interesting department of inquiry, then only just beginning to attract attention;* but which, by the united labours of Cuvier and Blumenbach, and our own distinguished countryman, Mr. Lawrence, has since been matured into a most interesting science, leading to results which even the sagacity of Bacon could hardly have anticipated.

He cautions the medical student against hastily pronouncing any disease to be incurable; acutely remarking, that this is to

* Dr. Harvey, says Aubrey, 'was always very contemplative, and the first that I hear of that was curious in Anatomy in England. He had made dissections of frogs, toads, and a number of other animals, and had curious observations on them, which papers, together with his goods, in his lodgings at Whitehall, were plundered at the Rebellion; he being for the King, and with him at Oxon; but he often said, that of all the losses he sustained, no grief was so crucifying to him as the loss of his papers, which for love or money he could never retrieve or obtain.'—Letters from the Bodleian Library, vol. 2, p. 379.

enact a law of neglect, and to exempt ignorance from discredit. His suggestion that there should be 'set down a narrative of the special cases of patients, and how they proceeded, and how they were judged by recovery or death,' is now universally adopted. In almost every principal hospital for the sick, Clinical lectures * are delivered: the various symptoms of disease in each patient being day by day carefully noted down, and forming the subject of extemporary discourse. The celebrated Dupuytren, surgeon to the Hotel de Dieu, whose recent loss his country has to deplore, was so convinced of the great practical advantage of this procedure, that, by his will, he has patriotically devoted a magnificent sum to the purpose of founding a Clinical Professorship.

Another suggestion of Bacon's may be mentioned, which, although an obvious one, has only been recently adopted. We allude

* *i. e.*, bed-side lectures.

to the fabrication of factitious mineral waters, identical in composition with those natural medicinal springs which have been found so efficacious in the cure of chronic diseases.*

As to the other department of human knowledge which concerns the mind, it refers as well to the substance or nature of the soul as to its faculties, which last branch of philosophy, according to Bacon's classification, has two parts, Rational and Moral.

As man's labour is to invent that which is sought or propounded; or to judge that which is invented; or to retain that which is judged; or to deliver over that which is retained; Bacon accordingly treats the intellectual arts as being four in number; *viz.*, the art of inquiry or invention; the art of examination or judgment; the art of custody

* There is an establishment at Brighton for dispensing mineral waters identical in composition with the most celebrated German springs, *viz.*, Carlsbad, Ems, Schlesischer, Marienbad, Auschowits, &c. &c. These waters may likewise be purchased at the principal chemists thoughout the country.

or memory; and the art of elocution or tradition. Having delivered many profound remarks on each of these arts and their various subdivisions, he then examines into the state of Moral Philosophy; and with this concludes his survey of that general part of human philosophy which contemplates man as an individual, consisting of body and mind.

The other principal part of human philosophy is Civil Knowledge; and this embraces the three arts of Conversation, Negotiation, and Government. On these he discourses at considerable length, and with his wonted wisdom and eloquence. 'Thus have I concluded,' says Bacon, 'this portion of learning touching civil knowledge; and with civil knowledge have concluded human philosophy; and with human philosophy, philosophy in general. And being now at some pause, looking back into that I have passed through, this writing seemeth to me, "si nunquam fallit imago," (as far as a man can judge of his own work,) not much better than

that noise or sound which musicians make while they are tuning their instruments; which is nothing pleasant to hear, but yet is a cause why the music is sweeter afterwards: so have I been content to tune the instruments of the muses, that they may play that have better hands. And surely, when I set before me the condition of these times, in which learning hath made her third visitation or circuit in all the qualities thereof,—as the excellency and vivacity of the wits of this age; the noble helps and lights which we have by the travails of ancient writers; the art of printing, which communicateth books to men of all fortunes; the openness of the world by navigation, which hath disclosed multitudes of experiments, and a mass of natural history; the leisure wherewith these times abound, not employing men so generally in civil business, as the states of Græcia did, in respect of their popularity, and the states of Rome, in respect of the greatness of their monarchy; the present

disposition of these times at this instant to peace; the consumption of all that can be said in controversies of religion, which have so much diverted men from other sciences; and the inseparable propriety of time, which is ever more and more to disclose truth—I cannot but be raised to this persuasion, that this third period of time will far surpass that of the Græcian and Roman learning: only if men will know their own strength and their own weakness both; and take one from the other, light of invention, and not fire of contradiction; and esteem of the inquisition of truth as of an enterprise, and not as of a quality or ornament; and employ wit and magnificence to things of worth and excellency, and not to things vulgar and of popular estimation. As for my labours,' continues Bacon, 'if any man shall please himself or others in the reprehension of them, they shall make that ancient and patient request, "Verbera, sed audi;" let men reprehend them, so they observe and

weigh them; for the appeal is lawful, though it may be it shall not be needful, from the first cogitations of men to their second, and from the nearer times to the times farther off.'

'Now let us come,' he adds, 'to that learning, which both the former times were not so blessed as to know,—sacred and inspired *Divinity*, the sabbath and port of all men's labours and peregrinations.' On this subject his observations are brief, but well worthy of serious attention, more particularly those which relate to the interpretation of Scripture. Here, as in other parts of his works, he strongly animadverts on the extreme prejudice which both religion and philosophy have received, and may receive, by being commixed together; as that which undoubtedly will make an heretical religion and an imaginary and fabulous philosophy. The school of Paracelsus, and some others, says Bacon, have pretended to find the truth of all natural philosophy in the scriptures; scandalizing and traducing all other philoso-

phy as heathenish and profane. 'But there is no such enmity,' he adds, 'between God's word and his works; neither do they give honour to the Scriptures, as they suppose, but much imbase them. For to seek heaven and earth in the word of God, (whereof it is said, "heaven and earth shall pass, but my word shall not pass,") is to seek temporary things amongst eternal: and as to seek divinity in philosophy is to seek the living amongst the dead, so to seek philosophy in divinity is to seek the dead amongst the living; neither are the pots or lavers, whose place was in the outward part of the temple, to be sought in the holiest place of all, where the ark of the testimony was seated. And again, the scope or purpose of the Spirit of God is not to express matters of nature in the Scriptures, otherwise than in passage, and for application to man's capacity, and to matters moral and divine. And it is a true rule, "Auctoris aliud agentis parva auctoritas;" for it were a strange conclusion, if a

man should use a similitude for ornament or illustration sake, borrowed from nature or history according to vulgar conceit, as of a basilisk, an unicorn, a centaur, a briareus, an hydra, or the like, that therefore he must needs be thought to affirm the matter thereof positively to be true.'

Strange to say, the spirit of Paracelsus still survives in a small section of 'Paper Philosophers,' as Galileo would have called them, who have endeavoured to raise an outcry against the inquiries of modern geologists, as if they led to results inconsistent with the Genesis of Moses; and to substitute their own dreams of cosmogony for theories founded on inductive research. Happily, however, the ignorance of Paracelsus lives only among his disciples, who have met with merited contempt.

'Thus,' says Bacon, in concluding his immortal work on the 'Proficiency and Advancement of Learning,'—'thus have I made, as it were, a small globe of the intel-

lectual world, as truly and faithfully as I could discover; with a note and description of those parts which seem to me not constantly occupate, or not well converted by the labour of man. In which, if I have in any point receded from that which is commonly received, it hath been with a purpose of proceeding in melius, and not in aliud; a mind of amendment and proficience, and not of change and difference. For I could not be true and constant to the argument I handle, if I were not willing to go beyond others; but yet not more willing than to have others go beyond me again: which may the better appear by this, that I have propounded my opinions naked and unarmed, not seeking to pre-occupate the liberty of men's judgments by confutations. For in any thing which is well set down, I am in good hope, that if the first reading move an objection, the second reading will make an answer. And in those things wherein I have erred, I am sure I have not prejudiced the right by litigious arguments; which certainly have

this contrary effect and operation, that they add authority to error, and destroy the authority of that which is well invented: for question is an honour and preferment to falsehood, as on the other side it is a repulse to truth.'

From this account, imperfect as it is, of the treatise on the 'Proficiency and Advancement of Learning,' the reader will be enabled to form some notion, at least, of the vast grasp of Bacon's mind, and the wonderful extent and variety of knowledge which he possessed. The greatest objects did not confound him, nor the minutest escape him. His classification of the sciences, so magnificent in its design—so able in its execution, is the only one of which modern philosophy has yet to boast; and the united talents of D'Alembert and of Diderot, aided by all the lights of the eighteenth century, have been able, says Dugald Stewart, to add but little to what Bacon performed.*

* Prelim. Diss. to Ency. Brit., p. 8.

II. *Novum Organum, sive Indicia de Interpretatione Naturæ.*

The survey of the sciences which Bacon executed in the first part of the Instauration was justly considered by him to be an undertaking so important, that on the successful accomplishment of it depended, in a great degree, the further advancement of knowledge. Men pent up in some favourite pursuit,—living, as it were, in an island of their own,—are prone to imagine that theirs is the 'celestial empire,'—theirs the only country wherein any thing can be learned deserving the attention of mankind. It was to explode this error; it was to awaken and stimulate the desire for further inquiry;—to show that there were other countries worthy of being explored,—some which had been only casually visited, others not colonised at all,—that Bacon delineated that intellectual chart which we have attempted to describe.

To execute so vast a design in so complete a way, with such comprehensiveness and yet minuteness,—illustrated, too, with all that is graceful in classic literature, or that the brightest fancy could bestow, was an effort of genius truly wonderful. But the great Advancer of Knowledge did not stop here. He saw plainly that if we had not other and better principles of procedure than those which then guided the inquiries of philosophers, his map of the world of science would be of little avail; that as Columbus could never have made those maritime discoveries which immortalized his name, without the aid of the magnetic needle; so, in philosophy, we should still be mere *coasters*,—so to speak—confined to our own native shores, unless possessed of some instrument that would direct us to those undiscovered regions of knowledge which lay beyond our ken.

With the philosophy of Aristotle, Bacon had long been dissatisfied; and even at college, when only about sixteen years of

age, (as he assured Dr. Rawley,) he fell into a dislike of that system, finding it barren of works beneficial to man, and fruitful only in logomachy; in which mind, says Rawley, he continued to his dying day. To propound a better method of discovery,—one that would purge philosophy from its errors, and enrich it with new truths,—had long been a favourite and fixed purpose with Bacon;* and having, after much meditation, matured and methodized his thoughts, he proposed his plan in the *Novum Organum*, (which forms the second part of his Instauration,) 'with so much strength of argument,' says one of his most distinguished disciples,†

* In his letter to Father Fulgentio concerning the Instauration, (written before the publication of his *Novum Organum*,) Bacon says, 'I remember that *about forty years ago* I composed a juvenile work about these things, which with great confidence and a pompous title, I called TEMPORIS PARTUM MAXIMUM.'—Bacon's Works, vol. 12, p. 205. See also his letter to lord Burleigh, ante, p. 22.

† Maclaurin's Account of Sir Isaac Newton's Discoveries, p. 59.

'and so just a zeal, as renders that admirable work the delight of all who have a taste for solid learning.' The grand and fruitful principle propounded by Bacon—and which is as universally * applicable as the Aristotelian dictum *De omni et nullo*, and without which that dictum would be a barren and useless abstraction—is the principle of INDUCTION. To unfold this principle—to teach mankind that the *only* method of inquiry which can conduct to any useful result is that which, taking facts and not opinions,—experience, not hypothesis, for its basis, proceeds, by means of rejections and conclusions, (*i. e.*, in the way of analysis,) to decompose the phenomena of nature; so as to elicit those axioms or general laws, (*i. e.*, generalized facts,) from which we may synthetically

* Novum Organum, lib. 1, aph. 127.—Works, vol. 9, p. 278. This aphorism must have escaped the recollection or attention of Dr. Copleston, when he asserted that 'the Organum of Bacon is confined to the department of physical science.'—Second Reply to the Edinburgh Review, p. 22.

infer, not only the particulars already inducted or brought in for examination, but others of which we had no previous knowledge*—to propound this procedure, with rules for conducting it aright, was the object designed and realized in the *Novum Organum;* and by which Bacon acquired, and so justly merited, the title of founder or *Father of Experimental Philosophy.*

In giving to this new method the name of 'Induction,'—an old scholastic term, well known to Plato and his pupil, Aristotle,—Bacon was influenced, perhaps, by the consideration that it would induce a more ready reception of his plan; that if the badges of the ancient philosophy were retained, its errors would be sooner abandoned, and *that* the more readily because there would be no

* See Novum Organum, lib. 1, aph. 19, 82, 103, 104, 105, 106; and see, ante, p. 126,—"*All true and fruitful natural philosophy,*' &c.

nominal change.* To avoid any ambiguity which might arise from the use of an old term in a new sense, Bacon, in various parts of his writings, cautiously distinguishes *his* Induction from that of Aristotle's; and yet some ardent admirers of the Stagirite, misled, perhaps, by the name, and eager to ascribe to their idol every kind of merit, have confidently asserted, that Bacon's induction is identical with the induction of Aristotle. A more erroneous opinion could not have been hazarded. 'It is like confounding,' says Dugald Stewart, 'the Christian Graces with the Graces of Heathen Mythology.' †

'The induction,' observes Bacon, 'of which the logicians speak of, and which seemeth familiar with Plato, (whereby the principles of sciences may be pretended to be invented, and so the middle propositions

* See, however, Bacon's own observations on this subject.—Works, vol. 2, p. 132, and vol. 9, p. 163.

† Dugald Stewart's Philosophy, vol. 2, p. 363.

by the derivation from the principles;) their form of induction, I say, is utterly vicious and incompetent: wherein their error is the fouler, because it is the duty of art to perfect and exalt nature; but they contrariwise have wronged, abused, and traduced nature. For *to conclude upon an enumeration of particulars without instance contradictory, is no conclusion, but a conjecture;* for who can assure, in many subjects, upon those particulars which appear of a side, that there are not others on the contrary side which appear not? As if Samuel should have rested upon those sons of Jesse which were brought before him, and failed of David, which was in field. And this form, to say truth, is so gross, as it had not been possible for wits so subtile as have managed these things to have offered it to the world, but that they hasted to their theories and dogmaticals, and were imperious and scornful towards particulars; which their manner was to use but as "lictores et viatores," for sarjeants and whifflers,

"ad summovendam turbam," to make way and make room for their opinions, rather than in their true use and service. Certainly it is a thing,' he adds, 'may touch a man with a religious wonder, to see how the footsteps of seducement are the very same in divine and human truth; for as in divine truth man cannot endure to become as a child, so in human, they reputed the attending the inductions whereof we speak, as if it were a second infancy or childhood.'*

That Bacon has not, in the preceding extract, misrepresented the Induction of Aristotle, appears as well from the Stagi-

* Advancement of Learning,—Works, vol. 2, pp. 179, 180; and see Novum Organum, lib. 1, aph. 105. Dr. Hampden, in his learned and instructive account of Aristotle's Philosophy, (Ency. Brit., vol. 3, pp. 513, 514,) has attempted to vindicate Aristotle's Induction against the disparagement of it by Bacon,—with what success the reader must judge. See Edinburgh Review for April, 1833, art. ix. For some valuable remarks on the inductive process, extracted from the reviewal referred to, see Note (D.)

rite's own words as those of some of his most learned expositors.*

Before we proceed to offer a short sketch of the *Novum Organum*, there is one remark which ought to be premised. 'Most arts,' says Dr Reid, 'have been reduced to rules *after* they had been brought to a considerable degree of perfection by the natural sagacity of artists, and the rules have been drawn from the best examples of the art that had been before exhibited; but the art of philosophical induction was delineated by lord Bacon in a very ample manner *before* the world had seen any tolerable example of it. This, although it adds greatly to the merit of the author, must have produced some obscurity in the work, and a defect of proper examples for illustration.' †

* See Dr. Wallis's Institutio Logica, lib. iii. cap. 15, and Dr. Gillies's Analysis of Aristotle's Works, vol. 1, p. 95, commented upon by Dugald Stewart in his Philosophy, vol. 2, pp. 365—370.

† Reid's Analysis of Aristotle's Logic, p. 142.

Admitting that experience, (which is the result either of observation or experiment,) is the only source of our knowledge of nature, still, before we can rightly interpret its phenomena, we must rid the mind of those prejudices which, like a false or uneven mirror, are apt to distort the truth. 'The mind of man,' says Bacon, 'is far from the nature of a clear and equal glass, wherein the beams of things should reflect according to their true incidence; nay, it is rather like an enchanted glass, full of superstition and imposture, if it be not delivered or reduced.' * Before the time of Bacon, no attempt had been made to detect and enumerate these prejudices or biases of the mind; and it was left for the great restorer of true philosophy to undertake so useful a task. This he accomplished in the first book of the *Novum Organum*, giving to these prejudices the significant name of *idols of the under-*

* Bacon's Works, vol. 2, p. 190.

standing: because, like false divinities, they have withdrawn men from the worship of Truth.

These prejudices or idols are divided by Bacon into four classes, which he denominates *Idola Tribus; Idola Specus; Idola Fori;* and *Idola Theatri: i. e.*, Idols of the Tribe, the Den, the Forum, and the Theatre.

1. The *Idols* of the *Tribe* are those prejudices which are inherent in human nature. Among these may be reckoned that disposition among men to assume the existence of a greater degree of order and uniformity in nature than experience is, in fact, found to justify; and thus when any thing inconsistent with this notion presents itself, it is either tortured, as it were, into reconcilement, or explained away. Thus, for example, as soon as the French geologists (MM. Cuvier and Brongniart) had accurately examined and described the tertiary strata of the Paris basin, an attempt was made to trace the

different subdivisions of this interesting group throughout Europe; and no sooner was a new tertiary formation discovered, as that of Italy, for instance, than geologists endeavoured to identify it with the Parisian type: every fancied feature of correspondence was dwelt upon and exaggerated into a likeness, whilst the wide difference in mineral character and organic contents was slurred over as trifling and unimportant. 'By the influence of this illusion,' says Mr. Lyell,* 'the succession and chronological relations of different tertiary groups were kept out of sight;' and thus the progress of geology was greatly retarded.

* Principles of Geology, vol. 3, p. 17, (1833.) In referring to this valuable work, (which has done more to popularise the science of geology in this country, and to diffuse correct notions concerning it, than any publication which can be mentioned,) we cannot avoid observing, that it affords an excellent example of a most successful application of the Baconian or inductive method of research, to a department of science, of all others the most infested with idols and visionary hypotheses.

This illustration, drawn from a deservedly popular science, (and others from this and widely different branches of philosophy might easily be adduced,) shows that Bacon was justly warranted in expecting (as he did*) that although the idols of the mind might be thrown down, still, when philsophy had been re-edified, they would be again set up and worshipped.

2. The *Idols* of the *Den* are those that originate from the peculiar character of the man. 'Although our persons,' says Bacon, 'live in the view of heaven, yet our spirits are included in the *caves* of our own complexions and customs, which minister unto us infinite errors and vain opinions, if they be not recalled to examination.'

Among the prejudices of this class none

* Novum Organum, Lib. 1, aph. 38. It is remarkable that so acute an observer as Dr. Copleston, the learned Bishop of Llandaff, should have asserted that 'there is not one of the *Idola* which is now defended or cherished in any seat of learning, or by any person of liberal education.'—Second Reply, p. 22.

deserve to be more strictly guarded against than those which spring from the particular studies to which one may be addicted. Habituated to a certain range of reading and reflection, a man's thoughts are apt to become, as it were, *localised;* and, as fabled of the cameleon, take their colour from surrounding objects. Aristotle, devoted to the study of metaphysics, carried his favourite pursuit, with all its verbal magic, into his physics; and thus corrupted that science, rendering it an almost everlasting source of controversy.

Dr. Gilbert, of Colchester,—an inquirer to whose patient observations the modern science of electricity is much indebted,—is another example*. Having assiduously studied the subject of magnetism, with considerable success, he forthwith began to construct a system of philosophy, founded on his favourite pursuit.

* His 'Treatise on the Magnet' was published in 1590, and re-published at Ferrara in 1629, with a commentary by Cabæus, a learned Jesuit.

Prejudices, or idols of this kind, are not, however, confined to what may be reckoned the pagan-age of philosophy. Not many years ago, an attempt was made to account for the phenemenon of gravitation, and the laws of vegetable and animal life, by means of galvanism and electricity. Truly it is a wise precept which Bacon delivers, that he who studies nature should distrust those things which he is accustomed to contemplate with delight.*

3. The *Idols* of the *Forum* or market-place are considered, by Bacon, the most troublesome of all, being those prejudices which are imposed upon us by words. 'In human life, or conversation,' says South, in one of his admirable discourses on this subject, 'Words stand for things; the common business of the world not being capable of being managed otherwise. For by these, men come to know one another's minds. By these, they covenant and confe-

* Novum Organum, Lib. 1, aph. 58.

derate, they deal and traffick.'* If, therefore, words do not accurately express the things of which they are the signs, and men cannot be brought to agree about their meanings, all controversies will end where they ought to have begun—in questions and differences about words. If divines and moralists had first detected and exposed the ambiguity of such words as 'certain,' 'election,' 'experience,' 'impossibility,' 'necessary,' 'person,' 'regeneration,' and the like,† before they engaged in those discus-

* South, vol. 2, p. 334.

† For an able exposition of these and some other ambiguous terms, see Dr. Whately's Logic, App. No. 1. A systematic work on this subject was suggested by Dr. Copleston to the late Dr. Parr, as one which his vast stores of erudition, and ready command of them, peculiarly fitted him to execute. This task, however, he never undertook. A hope has been held out that Dr. Copleston himself will employ his great talents and learning in this service. See his letter to Dr. Parr.—Parr's Works, vol. 7, p. 66, and the Preface to his Discourses, xvi. How well he is qualified for such a task, his admirable Dissertation on Analogy abundantly shows.

sions in which these terms are so often used, we should never have heard of so much wrangling and disputation—of so many sects and schisms.

As a remedy against this abuse of words, Bacon recommends that in all disputes, we should imitate the wisdom of mathematicians in defining our terms; so that others may know how we understand them, and whether they concur with us or no.* 'Nevertheless,' he says, 'these definitions cannot cure the evil; for definitions themselves consist of words, and words breed words; so that we must still have recourse to particular instances.'

Besides, it might be added, that the very circumstance of having, in the first place, defined our terms, is of itself calculated to engender an unimagined error. Thus, when

* Hobbes's remarks on this subject in his Leviathan, Part 1, chap. 4 and 5, coincide with those of his illustrious patron and friend; but the philosopher of Malmesbury enters more deeply into the discussion.

a writer, in entering upon any discussion on the subject of political economy, for instance, begins by laying down an exact definition of such terms as 'value,' 'wealth,' 'labour,' and the like,—this is likely to beget a false security in his mind, that as he rightly defined his terms in the outset, so they will be properly used by him throughout; whereas, if his definitions do not correspond with the writer's *ordinary* use of the terms defined, but are rather the result of recent reflection, he will be continually liable, as he becomes interested in the discussion, to forget his definitions, and to recur to his former usage: just as a person when conversing in a foreign language with which he is not very familiar, will, when his passions are roused, unconsciously express himself in his vernacular tongue.

4. The *Idols* of the *Theatre* are the fourth and last class enumerated by Bacon; and are those deceptions or fallacies of the mind which have arisen from the dogmas or

theories of different schools of philosophy. He gives to them this somewhat fanciful name, because, in his opinion, such theories are so many stage-plays, exhibiting only theatrical or imaginary views of nature. Convinced, as Bacon firmly was, that '*Man, as the minister and interpreter of nature, is limited in act and understanding by his observation of the order of nature; and that neither his knowledge nor his power extends farther*,'* —he at once rejects all systems whose foundations are not bottomed in experience; for though they may show much subtilty of speculation, yet, in practice, such fabrics of philosophy are of no substance or profit. These systems, says Bacon, are either sophistical, empirical, or superstitious:—*sophistical*, when experience having been but partially and carelessly consulted, they are principally built up with the untempered mortar of the mind;—*empirical*,

* Novum Organum, lib. 1, aph. 1.

when founded upon a hasty examination of a few particulars;—and *superstitious*, when philosophy is unwisely blended with theology.

Such is a brief sketch of the account which Bacon has given of those prejudices of the mind which he expressively termed the idols of the human understanding. 'In point of practical utility,' says Dugald Stewart, 'it is at least equal to any thing on that head to be found in Locke, of whom it is impossible to forbear remarking, as a circumstance not easily explicable, that he should have resumed this important discussion without once mentioning the name of his great predecessor.' * In the study of nature and its laws, these idols or prejudices must be resolutely rejected, and the mind completely purified; for we can no more, says Bacon, enter into the kingdom of man, which is founded on the sciences, than into the king-

* Prelim. Diss. to Ency. Brit. p. 33.

dom of heaven, unless we be first converted to the truth, "and become as little children."*

Lord Bacon then proceeds to offer some further observations on the false systems of philosophy, and the causes which had so long hindered the progress of true knowledge; urging, however, various grounds of encouragement and hope for its future advancement.

Here, as in various other parts of the *Novum Organum*, he reprobates the prejudice which philosophy had received from the inductive and syllogistic methods of logicians; condemning the one, because it proceeded (as before observed†) by simple

* Novum Organum, lib. 1, aph. 68; St. Matthew, chap. xviii., 3. For some valuable remarks on this subject, see sir John Herschel's Discourse on Natural Philosophy, pp. 79—84, and the introd. to his Treat. on Astronomy.

† Ante, p. 149.

enumeration, without proper rejections and exclusions, leading only to uncertainty and error; and repudiating the other, (*i. e.*, the syllogistic method,) because its discoveries are not those of first principles, but only of what seems to agree with them. If, therefore, the leading axioms be hastily abstracted or ill-defined, the whole falls to the ground. Accordingly, says Bacon, we reject the syllogism, and make use of genuine induction both for our major and minor propositions. Hence, he continues, the order of demonstration is reversed; for instead of flying forthwith from a few particulars to the highest abstractions, which are the pivots of controversy; and thence intermediately deducing all the rest, by a short way, it is true, but abrupt; impassable to nature, though accessible and suited to dispute;—our method, on the contrary, is to raise up axioms in gradual succession; from the less general to the more general; so that the ultimate gene-

ralization is not merely notional, but recognised by nature as her own.*

The sciences which existed in Bacon's time were principally derived from the Greeks;—a people, acute and subtle above all others; but aiming rather at founding sects than finding truth; so that their doctrines, says Bacon, resembled 'the talk of idle old men to ignorant youths.' From so corrupt a source, therefore, little or no true knowledge could be derived. Neither did Bacon augur more favourably of the existing systems of philosophy from the ages in which they took their rise; for then the world had been but partially explored; countries, where nature wantons in all her luxuriance and teems with wonders, were then unknown, or heard of only from tradition; and even history, limited as it was, told little more than those fabulous stories which ignorance

* Novum Organum, lib. 1, aph. 12, 69, 82, 104, 125; and vol. 9, pp. 166, 167.

and credulity had imposed upon the minds of men.

In adverting to the causes which had obstructed the progress of philosophy, Bacon mentions, among others, that blind attachment which men have to antiquity and the authority of great names; truly observing, that 'those times are the ancient times when the world is ancient; and not those which we account ancient, "ordine retrogrado," by a computation backward from ourselves.' Another obstacle to the progress of knowledge is superstition, and a misdirected zeal in matters of religion. Among the Greeks, those who first attempted to assign the physical causes of thunder and storms, were condemned as guilty of impiety. Nor did the early Fathers of the Church, says Bacon, treat those much better, who showed, upon the most conclusive evidence, that the earth is a sphere; and, consequently, that there are antipodes. It was the same blind zeal which condemned Galileo Galilei, (Bacon's

most illustrious contemporary,) to the prison of the unholy Office of the Inquisition for having maintained that the earth moves round its own axis;* and even Bacon himself—he who had nobly and eloquently said, that '*I had rather believe all the fables in the Legend, and the Talmud, and the Alcoran, than that this universal frame is without a mind,*'†—escaped not the bigoted attacks of the school-divines, who attempted to cry down his philosophical writings, by falsely asserting that they favoured atheism.‡

* See Drinkwater's Life of Galileo, ch. xiii., published in the Library of Useful Knowledge.

† Bacon's Works, vol. 1, p. 53.

‡ Osborn's Works, p. 446, (tenth edition.) The passage from which we learn this fact is too interesting not to be given in the words of the anthor, who was a contemporary observer:—'Sir Walter Raleigh was the first (as I have heard) that ventured to tack about, and sail aloof from the beaten track of the schools; who, upon the discovery of so apparent an error, as a torrid zone, intended to proceed in an inquisition after more solid truths, till the meditation of some, whose livelihood lay in hammering shrines for this superannuated study,

For the original source of such prejudices as these, we must look into that peculiar system of theoretic or speculative divinity which formerly prevailed. The scholastic philosophy, whose origin and character have recently been so ably and ingeniously investigated and explained by Dr. Hampden, was the acknowledged system of the Church, and soon stamped its metaphysical character upon theology, which became the master science. The *Trivium* and *Quadrivium* of the schools * were studied in sub-

possessed queen Elizabeth, that such doctrine was against God no less than her Father's honour, whose faith (if he owned any) was grounded upon school-divinity: whereupon she chid him, who was (by his own confession) ever after branded with the title of an Atheist, though a known asserter of God and Providence. A like censure fell to the share of venerable BACON till overbalanced by a greater weight of glory from strangers: nor could desert, and the name of the English Jewel, given Selden beyond sea, free him from a like imputation at home.'—Francis Osborn's Works, p. 446.

* The *Trivium* was a term invented to express the

servience to this system; and all science having been thus incorporated with theology, the notion arose, that nothing could be true in any science that was not accordant with the received interpretation of Scripture, whether literal or hypothetical.*

'If the scriptures,' said sir Humphry Davy, 'are to be literally interpreted, and systems of science found in them, Galileo Galilei merited his persecution, and we ought still to believe that the sun turns round the earth.'† And we would add, that those who seek for systems of geology, for instance, in the Genesis of

three sciences that were first learned in the schools, viz., Grammar, Rhetoric, and Logic; and the schools in which these sciences alone were taught were called *Triviales*. The *Quadrivium* comprehended the four mathematical sciences, viz., Arithmetic, Music, Geometry, and Astronomy.—Mosheim's Ecclesiastical History, vol. 2, p. 251, note; and see Dr. Hampden's Scholastic Philosophy, p. 63.

* Hampden's Scholastic Philosophy, p. 302, note.

† Sir H. Davy's Consolations in Travel, p. 141. See some judicious remarks on this subject by Archbishop Whately, Lectures on Political Economy, pp. 30—36.

Moses, are not consistent with themselves, when they acknowledge (as all rational people do acknowledge) the truth of the Copernican system. In the one case, they are guided by a just rule of construction, which, in the other, they reject.

It deserves to be mentioned, as an interesting fact which hereafter will be recorded in the history of science, that, in the year 1818, Pius VII., a pontiff alike distinguished for his liberality and love of knowledge, procured a repeal of the edicts against Galileo and the Copernican system. He assembled the congregation; and the late cardinal Toriozzi, assessor of the Sacred Office, proposed 'that they should wipe off this scandal from the church.' The repeal was carried, with the dissentient voice of one Dominican only.*

* Lyell's Principles of Geology, vol. 1, p. 99, note, (third edit.) 'Long before this time,' says Mr. Lyell, 'the Newtonian theory had been taught in the Sapienza, and all Catholic universities in Europe, (with the exception, I am told, of Salamanca;) but it was always re-

Another hindrance to the advancement of science has arisen from the habits and regulations of universities and other academical societies. These bodies were the great external means by which that sterile scholastic philosophy was cherished and matured which converted theology and physical science into a subtle system of abstract terms.* Chained down to the dogmas of particular authors, reason submitted to authority; and if any one dared to assert the liberty of thinking for himself, he was branded as an atheist; and perhaps, like Roger Bacon,—one of the most illustrious names in the early annals of science,—dragged from his studious cell into

quired of professors, in deference to the decrees of the church, to use the term *hypothesis*, instead of theory. They now speak of the Copernican *theory*.

* Hampden's Scholastic Philosophy, pp. 9, 86, and *passim*. 'In physical science,' says Dr. Hampden, 'it has been admitted, that conclusions from abstract terms are no valid indications of facts in nature. May we hope, that the time will come, when the like will be as fully and practically admitted in Theology!'—Ib., p. 56.

a prison. Now, however, science is no longer called upon to struggle against such attacks; but it must be confessed that, even in modern times, the progress of knowledge has been not a little retarded by the war-cry of innovation. When sir William Blackstone first began to deliver his law lectures before the university of Oxford, an attempt was made to cry him down as an innovator; and in various ways he was made to feel the influence of established opinions. In an introductory lecture, which unfortunately has not been published, he thus forcibly and eloquently retorted upon his opponents:— 'In those scholastic days,' said the learned commentator, 'when the original and inquisitive mind of Roger Bacon was directed to the investigation of Nature's laws, the theological animus conspired against him, and he was accused of holding communion with evil spirits. Upon a particular occasion, when he intended to exhibit some curious experiments to a few select friends, the secret hav-

ing got out, the whole town and all the colleges of the university were in an uproar. Priests, and fellows, and students were seen flying about in every direction, with their gowns streaming behind them, crying out, "no conjuror, no conjuror." The cry of "no conjuror" resounded from hall to hall, from cell to cell. At a later day, Galileo was condemned by men, whose names are now remembered only as parts of the rubbish upon which the pedestal of his fame is raised. And in our times, there are men who seek to raise the cry of "no conjuror" against me. I tell you, you will soon find out, that these good people are, at least, no conjurors themselves.' *

Another obstacle mentioned by Bacon, (and the last which can be noticed in this sketch,) is,—that rare or remarkable phenomena have been principally inquired into; such as are common or trivial, being carelessly

* See Note (E.)

admitted without examination. Familiar acquaintance, it has been truly said, is perpetually mistaken for accurate knowledge;* and thus it is, that a patient attention to subjects that are known is as often needed as information on those of which we are ignorant. The history of science affords innumerable illustrations of the truth of this position. The vibrations of a lamp, suspended from the roof of the cathedral of Pisa, appearing to recur at equal intervals, arrested the attention of Galileo; who, having brought his observation to the test, by comparing the vibrations with the beat of his pulse, struck out the happy idea, that an instrument might be constructed which could be usefully employed by medical men (he was himself then studying medicine,) to ascertain, with a precision not then attainable, the rate of the

* Abp. Whately's Political Economy, Lect. IX., and Logic, p. 332. Dr. Copleston has made the same remark in the Preface to his 'Four Discourses,' xiii. See also Bacon's Works, vol. 2, p. 189.

human pulse and its variations from day to day. This led to the use of the pendulum as a measure of time. The lamp and its oscillations had been seen by thousands, and forgotten; but the youthful philosopher witnessed the phenomenon with thoughtful attention; and from a fact, apparently trivial, elicited one of the most valuable principles in science.

The history of the Voltaic pile affords another illustration, quite as striking as the last, of the importance in physical science, of not neglecting any phenomenon, however well known or apparently insignificant, for which we cannot account. The convulsive motion of a dead frog placed near an electrical machine, was a phenomenon which had long been known; but, until the time of Galvani, it had excited little or no philosophic inquiry. In 1790 that eminent anatomist turned his attention to the subject. His observations excited the curiosity of Volta, who, taking up the inquiry with great

ardour, succeeded in constructing one of the most wonderful instruments invented by man—the Voltaic pile: an instrument which, in the hands of our illustrious countryman Sir H. Davy, effected a total revolution in chemical science.

Having suggested various grounds of hope that, notwithstanding the prejudices and errors of past times, knowledge would, in future, 'stretch forth her branches to the seas and to the floods,' lord Bacon concludes the first book of his *Novum Organum* with the animating reflection, that if to extend the power of our country over mankind,—an empire only to be gained by wrongs and human sufferings,—be an object of eager pursuit, how much nobler is that ambition, —if ambition it can be called,—which seeks to obtain, by the pleasant and peaceful paths of science, dominion over Nature herself.*

* Novum Organum, lib. 1, aph. 129.

In the second book of the *Novum Organum*, lord Bacon proceeds to develop more fully his inductive method, and to exemplify it; selecting for this purpose the subject of Heat. From what has been already said, it is obvious that, in every subject of inquiry, the first step is to collect such facts or phenomena as in any way relate to it,—not only those which spontaneously offer themselves, but such as can be elicited by experiment.

In this preliminary procedure, more skill and judgment are required than those unused to scientific pursuits will be prepared to expect.

It often happens that an object is not seen, from not knowing how to see it, rather than from any defect in the organ of vision. Mr. Babbage has given a striking illustration of this fact. Conversing with sir John Herschel on the dark lines observed in the solar spectrum by Fraunhofer, he inquired whether Mr. Babbage had seen

them; and on his replying in the negative, sir John Herschel mentioned the extreme difficulty he had had, even with Fraunhofer's description in his hand, and the long time which it had cost him in detecting them: he then added, 'I will prepare the apparatus, and put you in such a position that they shall be visible, and yet you shall look for them and not find them: after which, while you remain in the same position, I will instruct you *how to see them*, and you shall see them, and not merely wonder you did not see them before, but you shall find it impossible to look at the spectrum without seeing them.' On looking as he was directed, notwithstanding the previous warning, Mr. Babbage did *not* see them; and, after some time, he inquired how they might be seen, when the prediction of sir John Herschel was completely fulfilled.* But if it be some-

* Babbage's Reflections on the Decline of Science in England, pp. 210, 211.

times difficult to see an object, from not knowing how to see it, there is another obstacle of much more frequent occurrence, which all who are engaged in the study of nature must strictly guard against, viz. the proneness of observers, especially if they are illiterate, to record their remarks in theoretic language.* Many curious and interesting data have, on this account, been rendered worse than useless, for they have misled. Science, too, has sometimes suffered,

* See Stewart's Philosophy, pp. 467, 468, and Playfair's Prelim. Diss. to Ency. Brit. p. 559. 'If you will be at the pains carefully to analyse the simplest descriptions you hear of any transaction or state of things, you will find, that the process which almost invariably takes place is, in logical language, this; that each individual has in his mind certain *major-premises* or principles, relative to the subject in question; that observation of what actually presents itself to the senses supplies *minor-premises;* and that the statement given (and which is reported as a thing experienced) consists, in fact, of the *conclusions* drawn from the combinations of those premises.'—Whately's Lectures on Political Economy, p. 76.

from the *frauds* of observers: but, fortunately, this is of rare occurrence. The suppositious discovery of the Gioenia Sicula, by M. Gioeni, a knight of Malta, is, however, a good lesson on this subject, and will not be soon forgotten. Having, therefore, obtained an authentic and genuine collection of facts, described in terms which involve no theory or hypothesis, the next step is, by a comparison of these facts, to discover what Bacon calls the *form* of the particular subject of inquiry. In his Advancement of Learning, he remarks that Plato, who 'had a wit of elevation situate as upon a cliff,' did descry that *forms are the true subject of knowledge;* but adds, that he lost the real fruit of his opinions by considering them as mere abstractions, and not confined and determined (as in fact they are,) by matter.* From another passage (in the *Novum Orga-*

* Bacon's Works, vol. 2, pp. 136, 137; De Augment. Scient. lib. iii cap. iv. See Coleridge's Friend, vol. 3, pp. 204—216.

*num**,) it appears that Bacon uses the word *forms* as synonymous with *laws of nature;* and he seems to have entertained the lofty hope that the inductive method, if assiduously applied, would lead us to a knowledge of the essences of the properties or qualities of matter; as, for instance, the essence of heat, of colour, or of cold. 'It was natural, however,' says Professor Playfair, 'that Bacon, who studied these subjects theoretically, and saw nowhere any practical result in which he could confide, should listen to the inspirations of his own genius, and ascribe to philosophy a perfection which it may be destined never to attain.' †

Having, agreeably to the precepts of Bacon, brought together all ascertainable facts relative to the phenomenon whose form, *i. e.* cause or law is the object of inductive inquiry, we must begin with consider-

* Lib. ii. aph. xvii.

† Playfair's Prelim. Diss. p. 474.

ing what things are to be *excluded* from the number of possible forms. After this process of exclusion is accomplished, we are then possessed of a group of affirmative facts falling under the same predicament or class. This is the first step in the process of induction: it contracts the range of research, and brings the true explanation of the case in question within narrower limits. Thus, (to adopt the illustration adduced by Professor Playfair,) if the quality which is the cause of transparency in bodies be the subject of inquiry; from the fact that the diamond is transparent, we immediately exclude rarity or porosity, as well as fluidity; because the diamond is a very solid and dense body.*

Negative or opposing instances, *i. e.* facts where the given quality is wanting, must also, says Bacon, be carefully examined; for they are equally instructive. If, for instance, we confine air with moistened iron filings, in

* Playfair's Prelim. Diss. to Ency. Brit. p. 460.

a close vessel over water, its bulk will be diminished, owing to a portion of it having become combined with the iron in the form of rust; and, on examining the residual air, we shall find that it *cannot* support flame or animal life. Hence, from this negative or opposing fact, we discover that the cause of the support of flame and animal life is to be sought for in that part of the air which the iron has abstracted, *viz.* oxygen.*

Comparative instances, *viz.* those which show the given quality in a certain order or scale of intensity, are likewise to be considered. This is the more necessary because unless this class of facts is particularly attended to, we shall be apt to conclude that cases which differ only in the degree of intensity are distinguished by a real opposition of quality. Transparency and opacity, for example, would at first sight appear in direct opposition; but, on considering the

* Herschel's Nat. Phil. § 151.

gradual diminution of transparency in natural substances, 'we shall see reason, (as sir John Herschel observes,) to admit that the latter quality, instead of being the *opposite* of the former, is only its *extreme lowest degree.*'*

To render the affirmative, negative, and comparative facts more available, lord Bacon suggests that a tabular arrangement of them should be adopted. It is in this part of the *Novum Organum* that the author proceeds to exemplify his inductive method with reference to Heat. His collection of facts is allowed by Bacon's warmest admirers to be imperfect, yet, in the opinion of Professor Playfair,—his ablest and most eloquent commentator,—it is extremely judicious, and the whole disquisition highly interesting.

Having, therefore, cautiously examined all the assembled data,—whether affirmative, negative, or comparative,—we must then,

* Herschel's Nat. Phil. § 135.

after numerous 'rejections and exclusions,' (as before observed,*) elicit some few principles, common to every case; and having verified these, by trying if they will account for the phenomena which they represent, we must, by the same process of 'rejections and exclusions,' endeavour to reduce the principles which we have already obtained to some or one (if possible) more general. When we can advance no higher, the ultimate axiom must be assumed as the cause, and then verified in the same manner as the subordinate principles. If it account for all the phenomena, then we have rightly interpreted nature; and the law which was the object of our search, is evolved.

Some learned writers have supposed that Bacon's precepts relate only to physics; but the author himself designed them for all other sciences; nor does there appear any ground for asserting that the inductive me-

* Ante p. 146.—For '*conclusions*' read *exclusions*.

thod is not as applicable to the investigation of the laws of mind as the laws of matter. 'Some may doubt,' says Bacon, 'whether we propose to apply our method of investigation to natural philosophy only, or to other sciences, such as logic, ethics, politics? We answer, that we mean it to be so applied. And as the common logic, which proceeds by the syllogism, belongs not only to natural philosophy, but to all the sciences, so our logic, which proceeds by induction, embraces every thing.'*

As a further help to inductions, lord Bacon proposes that, among the mass of facts brought in for examination, those which strike us as peculiarly fitted for our purpose should hold a higher rank in the table of instances. These characteristic phenomena he accordingly terms *Prerogativæ Instantiarum*, enumerating twenty-seven different species;

* Novum Organum, lib. i. aph. 127; Playfair's Prelim. Diss. p. 460; and see Ed. Phil. Trans. vol. 8, p 382.

and reducing them into three classes, *viz.*: those which address themselves to the *understanding;* those which serve to correct or to inform the *senses;* and those which conduce to *practice,* i. e. to the invention of arts. To each of these twenty-seven species he assigns a characteristic, but somewhat fanciful name. To give the reader an idea of this part of the *Novum Organum,* we shall select a few of the principal Prerogative Instances, subjoining either Bacon's own examples, or such illustrations, disclosed by modern science, as will best show the author's design.

1. *Instantiæ Solitariæ,* or solitary instances, are either those which have nothing in common, except the quality whose form or cause is sought for; or those which have not that quality, but are in every other respect alike. Thus, if the cause or form of colour be the subject of inquiry, solitary instances of the first kind are to be found, says Bacon, in prisms, crystals, and globules of

dew, which under certain circumstances exhibit colour; but they have nothing in common with flowers, metals, and wood, except the colour itself. Of the second kind of solitary instances examples may be found in the variegated veins which are to be seen in some of our beautiful marbles; for these, principally, at least, differ only in colour, and not so much in substance or structure. The various colours of flowers offer another instance.

2. *Instantiæ Migrantes*, or migrating instances, are those in which the nature or property under consideration, travels or passes from one state to another,—from less to greater, or from greater to less; approaching to perfection in the one case, and in the other, verging towards decay. In illustration of this class, Professor Playfair refers to the fossil shells which we see so perfect in figure and structure in limestone, and gradually losing themselves in the finer marbles, till they are no longer distinguish-

able.* A more striking illustration, perhaps, may be drawn from the phenomenon of what is commonly called the attraction of cohesion. In hard bodies, such as the diamond or steel, we find this force extremely powerful; in caoutchouc it is very weak; liquids exhibit it in a still less degree; and if we apply the irresistible power of the voltaic battery to water, for instance, we may altogether destroy the cohesion of its particles, and convert the whole into its constituent gases of hydrogen and oxygen.

The atmospheric pressure affords another illustration: If we take a barometer in our

* Playfair's Prelim. Diss. p. 462. Even the *colours* of fossil shells belonging to species that are extinct, (as well as their figure and structure,) are sometimes preserved in so perfect a state that a common observer would suppose that they had just been taken from living testacea. Some fossil fish likewise retain their gaudy dress: one in the author's possession, found in the coal formation of Eisleben, is almost as bright in its hues as the brilliant gold-fish which enliven our ornamental tanks.

hand, and ascend some high mountain, such as the Puy de Dôme, where Pascal made his ever-memorable experiment, we shall find, as did that illustrious philosopher, that the mercury will sink; and that the loftier our station is, the lower will be the barometrical column; because the weight of the incumbent air is less. The same principle is shown in its effects upon the human frame. When M. Gay-Lussac, in his celebrated aeronautic voyage, ascended to the enormous height of twenty-two thousand nine hundred and twelve feet above Paris, (or sixteen hundred feet above the summit of the Andes,) he had great difficulty in breathing, and his pulse and respiration were much quickened. Even when M. de Humboldt ascended the Andes, the blood burst from his lips and ears.

3. *Instantiæ Ostensivæ*, or glaring instances, are those which show some particular nature or quality in its highest state of energy and power; either freed from its usual impediments, or counteracting them

by its own strength. Bacon adduces the thermometer in illustration of this class, as it strikingly displays the expansive power of heat. The beautiful and well-known experiment of the Magdeburgh hemispheres is a glaring instance of the atmospheric pressure on solids. Pascal's experiment, before noticed, might also be adduced in illustration of this class. Hutton's discovery in Glen Tilt of veins of granite ramifying from the principal mass, and traversing the schist and primary limestone, is another example; and afforded so glaring and conclusive a verification of his theory of the igneous origin of granite, that it called forth such marks of exultation as convinced the guides that the geologist must have discovered a vein of silver or gold. The magnet, too, may be mentioned as offering a beautiful glaring instance of that quality in nature which is known by the name of polarity.

4. *Instantiæ Conformes, i. e.,* analogous or similar instances, are those between which

there is an analogy or similitude in some particulars, though in others a great diversity.* The telescope and microscope compared with the eye may be mentioned as examples. Bacon's ear-spectacle, (or ear-trumpet, as it is now named,) and the concave roof of the dungeons of Syracuse, commonly called the 'ear of Dyonisius,' by which that tyrant used to listen to the words and whispers of his prisoners, are examples of a partial conformity with the construction of the human ear.

* Strictly speaking, Analogy signifies a similitude of *proportions;* but in a looser and translated sense it has been used not merely with reference to the relation of one quantity to another, but as signifying all similitude of relations whatsoever. In common discourse, *things* are said to be analogous when they are, in fact, only similar.—See Berkeley's Works, vol. 2, p. 63. In a short and luminous section, this great master of our language, and most acute logician, fully elucidates a subject which has produced not a little perplexity in the arguments of some of our theological writers. Bp. Berkeley's reasonings on this head have been ably illustrated by Bp. Copleston in his well-known 'Four Discourses,' pp. 122—141.

But one of the most beautiful and striking illustrations of this class of instances is afforded by the interesting phenomena of light and sound. Sound as well as light is capable of being reflected from surfaces; and in passing from a dense to a rare medium both are refracted; each is impeded when traversing an atmosphere of variable density; feeble sounds which are distinctly heard in the night are drowned in the continual hum of day; and when the sun is up, the stars disappear. Both sound and light are subject to the laws of interference. Under certain known circumstances, two vibrations of sound will neutralize each other's effects, and produce silence; so in like manner, two rays of light will destroy each other, and produce darkness.* These remarkable analogies render it extremely probable, that as sound is produced by the

* See sir John Herschel's Treatise on Sound in the Ency. Metropol., and his Discourse on Nat. Phil. § 288.

communication of a vibratory motion from the sounding body to the atmosphere which transmits it to the ear; so light is in like manner communicated from a luminous body to the eye by means of a highly subtle and elastic ether, which is supposed to pervade all space.

Of the great importance of attending to this class of analogous instances the discovery of the circulation of the blood affords another illustration; for it was by observing in the blood-vessels a contrivance similar to the valves employed in hydraulic machines for preventing the return of the water, and by reflecting on their use, that Dr. Harvey was led to this memorable discovery.

'I remember,' says Mr. Boyle,* 'that when

* Boyle's Works, vol. 4, p. 539. In Aubrey's account of Walter Warner,—a contemporary of Harvey, and of some note in his day,—it is said that Warner told Dr. Pell, that from what had passed in a conversation between himself, Dr. Harvey, and Mr. Prothero, at the earl of Leicester's, he had no doubt that Prothero had first *hinted* the fact of the circulation of the blood

I asked our famous Harvey, in the only discourse I had with him, (which was but a little while before he died,) what were the things which induced him to think of a circulation of the blood? he answered me, that when he took notice, that the valves in the veins of so many parts of the body were so placed, that they gave free passage to the blood towards the heart, but opposed the passage of the venal blood the contrary way, he was incited to think, that so provident a cause as nature had not placed so many valves without design; and no design seemed more probable, than that, since the blood could not well, because of the interposing valves, be sent by the veins to the limbs, it should be sent through the arteries,

to Harvey. So Isaac Walton, in a letter to Aubrey, says, that lord Winchester, who was acquainted with Warner, informed him, that Warner himself claimed to be the first discoverer.—See Aubrey's anecdotes, printed in the collection of Letters from the Bodleian Library, vol. 2, pp. 418, 578. Such gossip as this will never lessen Harvey's fame.

and return through the veins, whose valves did not oppose its course that way.'

5. *Instantiæ Potestatis,* or instances of power, are those which are reckoned the masterpieces of art. Lord Bacon suggests that these should be thoroughly examined; because they render the way to new discoveries and inventions more easy and feasible. 'For if any one,' he says, 'after an attentive contemplation of such works as are extant, be willing to push forward in his design with alacrity and vigour, he will either advance them or apply them to some other purpose.' In illustration of this class, Bacon adduces paper as a singular and beautiful production of art. If he had lived in this day, with what delight he would have described the almost miraculous machine invented by the eminent mechanist, Mr. Dickinson, of Hertfordshire, by means of which a continuous stream of fluid pulp is not only made into paper, but actually dried, polished, and every separate sheet cut round the edges, and rendered

completely ready for use, within the brief space of three minutes!*

Modern science affords numerous examples of this class of instances of power. The Davy, or safety-lamp, consisting only of a small oil light covered by a cylinder of wire-gauze, has disarmed an explosive atmosphere, perilous to human life, of all its power:—the Steam Engine, whose prodigious effects are so well known and appreciated in this country, is civilizing the world; and the Calculating Engine, contrived by Mr. Babbage, has been taught arithmetic by its celebrated inventor;†—these, and others which might be mentioned, are indeed wonderful masterpieces of art.

In surveying such splendid instances as these of skill and intellect, we are not to

* M'Culloch's Commercial Dictionary, art. Paper, p. 876, (second edition.)

† It is quite impossible to describe, in a few words, the astonishing powers of this Engine. For a particular account of it, see Babbage's Economy of Machinery and Manufactures, §§ 190, 191; and the Edinburgh Review for July, 1834, art. 1.

damp the ardour of our pursuits in science by entertaining the opinion that man can advance no further,—that he has already reached the highest pinnacle of human power; we ought rather, from the experience of the past, to replenish our lamp of hope, and to keep it burning. 'I know not,' said sir Isaac Newton, a little while before he died,—'I know not what I may seem to the world; but, as to myself, I seem to have been only like a boy playing on the sea-shore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.'*

6. *Instantiæ Crucis*, or crucial instances, are so called because when there are two rival hypotheses, and we are in doubt which is the true one, they serve the purpose of a *cross* or finger-post placed in the focus of divergent roads, to point out which way the

* Spence's Anecdotes, p. 158.—Malone's edit.

traveller should take. In illustration of this class, which is of the highest importance in physical inquiries, Bacon adduces various instances: one has justly been noticed by sir John Herschel as very remarkable, being, in fact, the proposal of a direct experiment to determine whether the tendency of heavy bodies downwards is a result of some peculiar mechanism in themselves, or of the attraction of the earth 'by the corporeal mass thereof, as by a collection of bodies of the same nature.'

'If it be so,' says Bacon, 'it will follow that the nearer all bodies approach to the earth, the stronger and with the greater force and velocity they will tend to it; but the farther they are, the weaker and slower.' His experiment consists in taking two clocks, one moved by leaden weights, and the other by a spring;* and, having set them together,

* 'By *clocks*,' says sir John Herschel, 'he could not have meant pendulum-clocks, which were not then known, (*the first made in England was in* 1622,) but

carrying the first to the top of a high church, and leaving the spring clock below; so that we may then observe whether the former move slower. He suggests, also, that this clock should then be carried down to the bottom of some deep mine, in order to ascertain if its rate of going be accelerated. 'In short,' says sir John Herschel, 'the principle of this experiment was the comparison of the effect of a spring with that of a weight, in producing certain motions in certain times, on heights and in mines. Now this,' he adds, 'is the very same thing that has really been done in the recent experiments of professors Airy and Whewell in Dolcoath mine: a pendulum (a weight moved by gravity,) has been compared with a chronome-

fly clocks, so that the comparison, though too coarse, was not contrary to sound mechanical principles.'—Discourse on Nat. Phil. § 196. It is very doubtful whether pendulum clocks were made in England so early as 1622.—See the art. 'Clock and Watch Work,' in the Ency. Brit. vol. 6, p. 767.

ter balance, moved and regulated by a spring.'*

In chemical inquiries, crucial instances are frequently resorted to—most tests are of this description.

With these six classes of instances, selected from the twenty-seven enumerated and explained by Bacon, we must close our account of the *Novum Organum;* referring those of our readers who are desirous of pursuing the subject, (and of such we hope there will be many,) to the work itself, and to the profound and beautiful Dissertation on the Progress of Mathematical and Physical Science by Professor Playfair.†

To have given a complete analysis of the *Novum Organum* with appropriate illustrations, (however agreeable to the writer,) would have been inconsistent with his de-

* Herschel on Nat. Phil. § 196.

† See also 'An Account of lord Bacon's Novum Organon Scientiarum,' published in the Library of Useful Knowledge:—a very cheap and valuable treatise.

sign;—sufficient, he hopes, has been done to show the general scope and object of this immortal work.

Having treated of Prerogative Instances, it was lord Bacon's design to offer some further helps to Induction; but this part of his work he never finished. Writing to the King upon the publication of the *Novum Organum*,* (and at this time Bacon was above sixty years of age,) he says, 'the reason why I have published it now, specially being imperfect, is, to speak plainly, because I number my days, and would have it saved. There is another reason of my so doing, which is to try whether I can get help in one intended part of this work, namely, the compiling of a natural and experimental history, which must be the main foundation of a true and active philosophy. One thing,' he adds, 'I confess I am ambi-

* October 12th, 1620.

tious of, with hope, which is, that after these beginnings, and the wheel once set on going, men shall seek more truth out of christian pens, than hitherto they have done out of heathen:—I say with hope, because I hear my former book of the Advancement of Learning, is well tasted in the universities here, and the English Colleges abroad; and this is the same argument sunk deeper.*'

In collecting materials for a natural and experimental history, Bacon had diligently laboured; designing this work for the *third* part of his Instauration, which he called *Phænomena Universi.* The result of his

* Bacon's Works, vol. 12, p. 393. In the same letter he says, speaking of the *Novum Organum*, 'The work, in what colours soever it may be set forth, is no more but a new logic, teaching to invent and judge by induction, as finding syllogism incompetent for sciences of nature; and thereby to make philosophy and sciences both more true and more active.' The *Novum Organum* was dedicated to King James, who used to say,—somewhat irreverently,—'that it was like the peace of God, which passeth all understanding.'

researches appears in the Sylva Sylvarum, which was not published until after his death. To modern readers, this is, perhaps, the least valuable of lord Bacon's works: it is a multifarious collection of particulars on a variety of subjects, and quaintly divided into ten centuries. Many of his own experiments, which he has minutely described, are, however, extremely interesting. 'We desire,' said he, 'that men should learn and perceive, how severe a thing the true inquisition of nature is; and should accustom themselves, by the light of particulars, to enlarge their minds to the amplitude of the world, and not reduce the world to the narrowness of their minds.'*

The fourth, fifth, and sixth parts of the Instauration he did not live to complete; indeed, the splendid structure that he had designed, was one, as he himself foresaw,

* Sylva Sylvarum, cent. 3, art. 290.—Works, vol. 4, p. 142

which could not be reared in one age, but must be left to time. What was the nature of those extensive works which his capacious mind had planned, will appear from the following letter to Father Fulgentio, which, although long, is too interesting and characteristic of the illustrious author, not to be given entire:—

'Most reverend Father,—I must confess myself to be a letter in your debt; but the excuse which I have, is too, too just. For I was kept from doing you right by a very sore disease, from which I am not yet perfectly delivered.

'I am now desirous to communicate to your fatherhood the designs I have touching those writings which I form in my head and begin; not with hope of bringing them to perfection, but out of desire to make experiment, and because I am a servant to posterity; for these things require some ages for the ripening of them.

'I judged it most convenient to have them

translated in the Latin tongue, and to divide them into certain tomes.

'The first tome consisteth of the books of the *Advancement of Learning* which, as you understand, are already finished and published; and contain the Partition of Sciences, which is the first part of my Instauration. The *Novum Organum* should have immediately followed, but I interposed my moral and political writings, because they were more in readiness.

'And for them they are these following:— The first is, The *History of Henry the Seventh*, King of England. Then follows that which you have called in your tongue, "Saggi Morali." But I give a graver name to that book; and it is to go under the title of *Sermones Fideles*, or Interiora Rerum. Those essays will be increased in their number, and enlarged in the handling of them. Also, that tome will contain the book of the *Wisdom of the Ancients;* and this tome (as I said,) doth, as it were, interlope, and doth not stand in the order of the Instauration.

'After these shall follow the *Novum Organum*, to which a second part is yet to be added, which I have already comprised and measured in the idea of it. And thus the second part of my Instauration will be finished.

As for the third part of the Instauration, that is to say the *Natural History*, it is plainly a work for a king or a pope, or for some colleges or order; and cannot be by personal industry performed as it ought.

'Those portions of it which have already seen the light, to wit, concerning winds, and touching life and death, they are not pure history, by reason of the axioms and larger observations which are interposed. But they are a kind of mixed writings, composed of natural history and a rude and imperfect instrument, or help, of the understanding. And this is the fourth part of the Instauration; wherefore that fourth part shall follow, and shall contain many examples of that instrument, more exact, and much more fitted to rules of induction.

'Fifthly, there shall follow a book to be entitled by us *Prodromus Philosophiæ Secundæ*. This shall contain our inventions about new axioms to be raised from the experiments themselves, that they which were before as pillars lying uselessly along may be raised up. And this we resolve on for the fifth part of our Instauration.

'Lastly, there is yet behind the *Secondary Philosophy* itself, which is the sixth part of the Instauration. Of the perfecting this I have cast away all hopes; but in future ages perhaps the design may bud again. Notwithstanding in our Prodomie, such I mean only, which touch almost the universals of nature, there will be laid no inconsiderable foundations of this matter.

'Our meanness, you see, attempteth great things; placing our hopes only in this, that they seem to proceed from the providence and immense goodness of God. And I am by two arguments thus persuaded, First, I think thus, from that zeal and constancy of my mind, which has not waxed old in this

design, nor after so many years grown cold and indifferent. I remember that about forty years ago I composed a juvenile work about these things, which with great confidence and a pompous title, I called Temporis Partum Maximum.

'Secondly, I am thus persuaded because of its infinite usefulness; for which reason it may be ascribed to divine encouragement. I pray your fatherhood to commend me to that most excellent man, Signior Molines, to whose most delightful and prudent letters I will return answer shortly, if God permit. Farewell, most reverend father.

'Your most assured friend,

'FRANCIS ST. ALBAN.'

In closing this brief account of the Instauration, it would be superfluous, after the splendid eulogies bestowed on that great achievement by some of the most illustrious philosophers of modern times—by D'Alembert and Diderot—by Playfair and Stewart—

by Mackintosh and Herschel,* to offer any remarks upon its merits. Sir David Brewster, indeed, has delivered it as his opinion, that the Philosophy of Bacon, which, by the general suffrage of his own countrymen and of foreigners, has justly entitled its immortal author to the honourable appellation of *Father of Experimental Philosophy*, is after all destitute of merit; and that it is quite a mistake to suppose that the progress of science was accelerated by its publication. He further alleges that there are no testimonies to show that any of the philosophers who succeeded Bacon have acknowledged that they derived from his precepts the slightest advantage. 'Nearly two hundred years have gone by,' says he, 'and no grateful disciple has appeared to vindicate the rights

* Discours Préliminaire de l'Encyclopédie; Playfair's Prelim. Diss., pp. 454—470; Dugald Stewart's Prelim. Diss., ch. 11, s. 1; Philosophy, vol. 2, ch. iv.; Mackintosh's reviewal in Edinburgh Review for September, 1816, art. ix.; Herschel's Nat. Phil. ch. 111.

of the alleged legislator of science.'* If such a statement had been made by one less eminent in the literary and scientific world than sir David Brewster, we should have disregarded it as unworthy of attention, or dismissed it with the remark, that the writer betrayed a total ignorance not only of the history of modern science, but of the scientific literature of his own times and country. Sir David Brewster cannot, however, be ignorant of the writings of those illustrious philosophers to whom we have just referred, nor do we suppose that he is unacquainted with the history of modern science; and we cannot account for the extraordinary opinion he has put forth, unless by recalling to mind a remark made by the late sir James Mackintosh, that 'professors of the experimental

* Brewster's Life of Newton, p. 334. A writer in the Annals of Philosophy, vol. 12, p. 382,—it cannot be Dr. Thomson,—is not content with condemning the Baconian logic, but protests that those who have had the greatest admiration for it, have been the very men from whom science has derived the least advantage!

sciences are accustomed to regard, as the sole test of service to knowledge, a palpable addition to its store.'

To judge of Bacon by such a test is wholly to overlook the real character of his genius and philosophy. What he did aim at in his Instauration we have in the foregoing pages endeavoured to explain. True it is, he made no discoveries; but with untiring zeal and fervid eloquence, he taught the method by which discoveries are made. He endeavoured (and most successfully) to withdraw science from the sterile philosophy of the schools; and pointed to the land of promise. Bacon's eminent services in this respect were early acknowledged, and thus elegantly expressed, by Cowley, in an Ode to the Royal Society, then lately founded:—

> Bacon, like Moses, led us forth at last,
> The barren wilderness he past,
> Did on the very border stand
> Of the blest promised land;
> And from the mountain's top of his exalted wit,
> Saw it himself, and showed us it.

In order to prove our position that Bacon's Philosophical Writings did accelerate the progress of physical science, we must have recourse to the testimonies of those who early experienced or acknowledged their operation. If sir David Brewster's opinion be correct, no such testimonies are to be found; but the truth is, they are so numerous and conclusive, that the difficulty is not where to find them, but which to select.

From a passage already quoted * it appears, that before the publication of the *Novum Organum*, the Advancement of Learning had been 'well tasted,' not only in our own universities, but in the English colleges abroad. 'Dr. Collins, Provost of King's College, Cambridge, a man of no vulgar wit, affirmed unto me,' says Dr. Rawley, 'that after reading the *Advancement of Learning*, he found himself in a case to begin his studies anew, and that he had lost

* Ante, p. 203.

all the time of his studying before.'* In 1623, the University of Oxford honourably distinguished itself by presenting to Bacon an address of thanks, in which he is represented as a 'mighty Hercules, who had by his own hand further advanced those pillars in the learned world, which by the rest of that world were supposed immovable.' † The testimonies of Ben Jonson and sir Henry Wotton—two of the most learned and eminent men among Bacon's contemporaries—may likewise be adduced. 'The *Novum Organum*,' said Jonson, 'is not penetrated or understood by superficial men,

* Rawley's Life of Bacon, prefixed to his Resuscitatio.

† Bacon's Works, vol. 12, p. 209. 'This most accurate pledge of your understanding [De Augmentis Scientiarum] has been,' says the University, 'with the most solemn reverence, received in a very full congregation, both by the doctors and masters; and that which the common vote hath placed in our public library, every single person hath gratefully deposited in his memory.'

who cannot get beyond nominals, but it really openeth all defects of knowledge whatsoever; and is a book

Qui longum noto scriptori proroget ævum.'*

Writing to Bacon from Germany, 'I have received,' says Wotton, 'three copies of that work, wherewith your lordship has done a great and everlasting benefit to all the children of nature, and to nature herself in her uttermost extent of latitude, who never before had so noble nor so true an interpreter, or never so inward a secretary of her cabinet.'† Duly estimating the importance

* Jonson's Discoveries.

† *Reliquiæ Wottonianæ*, p. 298, (fourth edit.) In this letter sir Henry Wotton gives a very interesting account of his meeting with Kepler at Lintz, in Austria; and he mentions to Bacon his intention of giving a copy of the *Novum Organum* to that celebrated philosopher. At this time Kepler could only have just returned to Lintz, after having saved his mother, then nearly seventy years old, from the rack.—See Mr. Drinkwater's interesting Life of Kepler, p. 50, published in the Library of Useful Knowledge.

and influence of the Baconian philosophy, this acute observer, says Dr. Beale, in a letter to Mr. Boyle, written about forty years afterwards, 'would often please himself in lashing the schoolmen; and would often declare it as a serious prediction, that in *this age* their reputation would yield to more solid philosophy;' and Dr. Beale adds, that he had himself been weaned from the errors of the schools by the early perusal of Bacon's philosophical writings.*

The influence of the Baconian or '*New Philosophy*,' as it began to be called, may be proved as well by the testimony of those who relished its principles, as by the alarm which it produced among the Aristotelians. Not only the weapons of controversy, but of bigotry and falsehood, were called into action to arrest the progress of doctrines whose aim was to overthrow the barren phy-

* Boyle's Works, vol. 6, p. 355, quoted by Professor Napier in his very able article, before alluded to, in the Ed. Phil. Trans. vol. 8, p. 393.

sics of the schools. As already observed,* the school-divines,—'whose livelihood lay in hammering shrines for this superannuated study,'—attempted to discredit the doctrines of Bacon's Philosophical Writings by alleging that they favoured atheism; 'but this censure,' says Osborn, 'was overbalanced by a greater weight of glory from strangers.'† As a specimen of the opinions of some of Bacon's opponents, the following passage may be cited from the Arcana Microcosmi of Alexander Ross, published in the year 1652, about twenty-five years after Bacon's death. 'I have,' says he, 'cursorily run over my lord Bacon's *New Philosophy*, and find that philosophy is like wine, the older the better. For, whereas Aristotle had, within infinite pains and industry, and not without singular dexterity, reduced all entities into certain heads, and placed them in ten classes or predicaments to avoid confusion, and that we might, with the more

* Ante, p. 167.

† Osborn's Works, p. 446.

facility, find out the true genus and difference of things; which Aristotelian way hath been received and approved by all universities, and the wise men since his time in all ages, as being the most consonant to reason; yet these *New Philosophers*, as if they were wiser than all the world besides, have, like fantastic travellers, left the old beaten path, to find out ways unknown, and have reduced his comely order into chaos; jumbling the predicaments so together, that their scholars can never find out the true genus of things.' *

* Ross's Arcana Microcosmi, p. 263; Ed. Phil. Trans. vol. 8, p. 395. Alexander Ross was a most multifarious writer, as may be seen from the list of his works, which he prefixed to 'A View of all Religions in the World,'—a curious, and in some respects valuable book. His works are, however, now almost forgotten, but his *name* is immortalized in Butler's inimitable poem:—

'There was an ancient sage philosopher,
That had read *Alexander Ross* over;
And swore the world, as he could prove,
Was made of fighting and of love.'

Hudibras, cant. 2.

In spite, however, of all this opposition, the Baconian Philosophy became more and more studied; and as early as 1645, (only nineteen years after Bacon's death,) an experimental philosophical society was formed in London, by Dr. John Wallis, the celebrated mathematician, Dr. Wilkins, (afterwards Bishop of Chester,) Dr. Goddard, and some other distinguished men of that day: 'Our business,' says Wallis, 'was to discourse and consider of things appertaining to what hath been called the *New Philosophy;* which from the times of Galileo and Bacon, hath been much cultivated in Italy, France, Germany, and other parts abroad, as well as with us in England.' In about three years afterwards, Drs. Wilkins, Wallis, and Goddard, having removed to Oxford, they formed another society, with a similar object; which reckoned among its members some of the most learned men in the University, including the honourable, and ever-to-be-honoured, Robert Boyle. The

London society still continued its meetings; and after the King's return, in 1660, was much increased by the accession of several new members. In 1662, it was incorporated under the title of Royal Society for the improving of Natural Knowledge.*

The first suggestion of a society of this sort is admitted to have originated with Bacon; who, in his New Atlantis, sketched an alluring description of an institution dedicated to the study of nature and her laws; giving to it the name of Solomon's House, or the College of the Six Days' Works.†

* See Note (F.) Bishop Wilkins, says Aubrey, 'was the principal reviver of experimental philosophy (*secundum mentem Domini Baconi,*) at Oxford. He left a legacy of four hundred pounds to the Royal Society, and, had he been able, would have given more.'—Vol. 2, p. 583. See Wordsworth's Ecclesiastical Biography, vol. 6, pp. 501—504, 535.

† Bacon's Works, vol. 2, pp. 323, 348. 'This fable,' [New Atlantis,] says Rawley, who published it after Bacon's death, 'my lord devised, to the end that he might exhibit therein a model or description of a college, instituted for the interpreting of nature, and the

In his History of the Royal Society, published in 1667, Dr. Sprat expressly says, that it was first devised by Bacon; and adds, 'if my desires could have prevailed with some excellent friends of mine, who engaged me to this work, there should have been no other preface to the History of the Royal Society, but some of his writings.'* The testimony of Mr. Oldenburg, who was the first secretary to the society, may likewise be adduced, to show that Bacon was then admitted to be the founder of the

producing of great and marvellous works, for the benefit of men. And even so far his lordship hath proceeded, as to finish that part. Certainly the model is more vast and high than can possibly be imitated in all things; notwithstanding most things therein are within men's power to effect. His lordship thought, also, in this present fable, to have composed a frame of laws, or of the best state or mould of a commonwealth; but foreseeing it would be a long work, his desire of collecting the Natural History diverted him, which he preferred many degrees before it.'—Preface to the New Atlantis.

* Sprat's Hist. of the Royal Society, p. 35.

experimental school of philosophy. 'The enrichment of the storehouse of Natural Philosophy, was a work,' he says, 'begun by the single care and conduct of the excellent lord Verulam, and is now prosecuted by the joint undertakings of the Royal Society.'* So in a letter to Mr. Oldenburg, Archdeacon Childrey says, that he had for several years been engaged in those philosophical matters which form the business of the Royal Society, 'though, indeed,' he adds, 'I first fell in love with the lord Bacon's

* Philosophical Transactions, No. 20, p. 391. In another place he says, 'When our renowned lord Bacon had demonstrated the methods for a perfect restoration of all parts of real knowledge, *the success became on a sudden stupendous*, and effective philosophy began to sparkle and even to flow into beams of bright shining light all over the world.' 'Many of the chief universities in Christendom have formed themselves into philosophical societies, and have largely contributed their aids to advance lord Bacon's design for the instauration of arts and sciences.'—Pref. to Phil. Trans. for 1672-1677. Mr. Oldenburg, it should be remembered, was a foreigner.

Philosophy in the year 1646;'* and in the introduction to his *Britannia Baconica* he observes, that he had given his work that title, in order to indicate its connection with those studies which Bacon originated. In addition to these conclusive testimonies, there is the authority of the learned and gentle Evelyn, whose amiable character inspired some of Cowley's sweetest strains, who forcibly says, that 'by standing up against the dogmatists, Bacon emancipated and set free philosophy; and which hath ever since made conquests in the territories of nature.'† Numerous other writers of this period might be cited, all doing grateful homage to Bacon as the 'Patriarch of Experimental Philosophy.'‡

* Wood's *Athenæ Oxonienses*, vol. 3, p. 904.—Bliss's edition.

† Evelyn's Numismata, and see the introduction to his Sylva; Ed. Phil. Trans., vol. 8, pp. 402, 403.

‡ See particularly Glanvill's Plus Ultra, or the Advancement of Learning since the days of Aristotle, pp. 52, 87, 88. In his *Vanity of Dogmatizing*, published in 1661, and in a work which he called *Scepsis*

The public sanction given to the philosophy of Bacon by the incorporation of the Royal Society, excited considerable alarm among those who still adhered to the antiquated doctrines of the schools, which found expression, not in argument, but in violent abuse of the whole body of experimentalists, and of Bacon and the Royal Society in particular. The most notable advocate for the Aristotelians was Dr. Henry Stubbe,—a man of various learning, but of no fixed principles, and, as we learn from his biographer, of 'a

Scientifica, Glanvill eminently distinguished himself as an advocate for the New Philosophy; he likewise engaged in a controversy with Dr. Henry Stubbe on the same subject. Glanvill's first work was answered by Thomas White, in his *Sciri*, under the assumed name of *Anglus*. 'Hobbes of Malmesbury,' says Wood, 'had a great respect for White, and when he lived in Westminster, he would often visit him, and he Hobbes; but seldom parted in cool blood; for they would wrangle, squabble, and scold about philosophical matters like young sophisters, though either of them was eighty years of age.'—*Athenæ Oxon.* vol. 3, p. 1248.—Bliss's edit.

hot and restless head, his hair being carrot-coloured.'* He does not disguise the reason of his reiterated attacks upon Bacon, but expressly says, 'that it is because his repute was great in that age, and the Royal Society pretended to tread in his footsteps;' and, to express his utmost contempt for the experimental philosophers, this learned doctor commonly called them *a Bacon-faced generation;* 'against whom,' he says, 'we must rise as high in our resentments as the concerns of the present age and of posterity can animate us.'† How true is Hobbes's

* Wood's Athen. Oxon. vol. 3, p. 1072.—Bliss's edit. 'Some years after the King's restoration,' says his biographer, 'he took pet against the Royal Society, (for which before he had a great veneration,) and being encouraged by Dr. Jo. Fell, no admirer of that society, became in his writings an inveterate enemy against it for several pretended reasons.'—Ib., pp. 1070, 1.

† Stubbe's Legends no Histories; or, a Specimen of some Animadversions upon the History of the Royal Society.—Pref. 4to. Lond. 1670. The following is an amusing specimen of Dr. Stubbe's abusive attacks:—'Who knows not,' he asks, 'how Herbary had been

aphorism, that as oft as reason is against a man, so oft will a man be against reason! *

We have before remarked, that the honourable Robert Boyle became a member of the Oxford Philosophical Club—'the incunabile,' says Aubrey, † 'of the Royal

improved by Theophrastus, Dioscorides, the Arabians, and other Peripatetics? who can deny that Physic, in every part of it, was improved by Galen and others, before the lord Bacon ever sucked? and what accessionals had not Chemistry received by the cultivation of the Aristotelians, before his *House of Solomon* was dreamed of? Let us, therefore, not be concluded by the aphorisms of this Lord. Let his insulse adherents buy some salt, and make use of more than one grain when they read him; and let us believe better of the ancients than that their methods of science were so unfruitful.'—Lord Bacon's Relation of the Sweating Sickness examined, Pref.

* Tripos, Ep. Ded. The copy which we use formerly belonged to the late sir James Mackintosh, whose numerous marks show how diligently he had studied this treatise. In another work of Hobbes, there is the following interesting entry in sir James's own hand:—'*Bot. in a Parsee's shop in Bombay, 22nd Octr.*, 1806. *Neither Zoroaster nor Hobbes foresaw the conjunction.*'

† Vol. 2, p. 583; and see Note (F.)

Society,'—and it was about the year 1668, that he received the appellation of the second Bacon.* 'Neither can there be any doubt,' observes Professor Napier, 'as to the influence of Bacon's writings in determining the nature and objects of his philosophical pursuits. This is admitted, or implied, in many parts of his works.† It is clear, indeed,' he adds, 'that he was considered by his contemporaries as a marked disciple of Bacon.'‡ Those who are eager to deny that Boyle derived any advantage from the *Novum Organum*, are equally ready to affirm that Newton owed nothing to the same Philosophy.§ It is evident, however, that Newton had carefully studied Bacon's writings, and even adopted (too implicitly, says

* See Glanvil's Plus Ultra, p. 57.

† Boyle's Works, vol. 1, p. 305, 306; vol. 2, p. 472; vol. 3, p. 422; vol. 4, pp. 59, 246; vol. 5, p. 567.

‡ Ed. Phil. Trans., vol. 8, p. 403; and see Boyle's Works, vol. 6, p. 405.

§ See Brewster's Life of Newton, p. 334.

Dugald Stewart,*) his logical phraseology; and in the View of his Philosophy by his friend Dr. Pemberton, that author having remarked that lord Bacon has judiciously observed, that the neglect of the proper means to enlarge our knowledge, joined with the presumption of attempting what was quite out of the power of our limited faculties is the great obstruction to the progress of science; tells us, that 'indeed that excellent person was the first who expressly writ against this way of philosophizing; and he has laid open at large the absurdity of it in his admirable treatise, intitled *Novum Organon Scientiarum:* and has there likewise described the true method, which ought to

* Stewart's Philosophy, vol. 2, p. 334, note. In commenting on one of Bacon's illustrations of his *Instantiæ Migrantes*, sir John Herschel observes, that 'in reading this, and many other instances, in the *Novum Organum*, one would almost suppose, (had it been written,) that its author had taken them from Newton's Optics.'—Herschel's Nat. Phil. § 198.

be followed.*' The author then gives a summary of Bacon's doctrines; and in the preface he informs us, not only that his work was generally approved of by Newton himself, but that he and his illustrious friend had read a great part of it together. Mr. Maclaurin, too, another of Newton's friends, and one of his most illustrious successors, expressly says, that Bacon is 'justly held amongst the restorers of true learning, but more especially the founder of experimental philosophy;' and adds, that his 'exhortations and example had a good effect; and experimental philosophy has been much more cultivated since his time, than in any preceding period.'†

The merit, however, of Bacon's philosophy, was not only acknowledged in England, but commanded the general admira-

* Pemberton's View of sir Isaac Newton's Philosophy, p. 5, et seq.

† Maclaurin's Account of sir Isaac Newton's Discoveries, pp. 59, 62, (third edit.)

tion of Europe; and, indeed, it appears that at one time his fame sounded louder abroad than at home.* Some testimonies to this effect have already been given;† but many others may be adduced.

In 1633, M. Deodate, a French advocate, addressed a letter to Dr. Rawley, expressing, in the strongest terms, the great anxiety which was felt for the publication of those posthumous works which Rawley had in preparation for the press.‡ So in 1652, only twenty-six years after Bacon's death, Isaac Gruter, writing from the Hague, on the subject of Bacon's works, informs Dr. Rawley, that he had lately received a letter from Lewis Elzevir, of Amsterdam, in which he expresses an intention of publishing a complete edition of Bacon's works, and desires his advice and assistance, 'to the end that,

* Rawley's Life of Bacon, prefixed to Resuscitatio published in 1657.

† Ante, pp. 98, 203, 217.

‡ Bacon's Works, vol. 12, p. 215.

as far as possible, those works might come abroad with advantage, which have been long received with the kindest eulogies, and with the most attested applause of the learned world.'* The testimony of Des Cartes and his biographer, will show that Bacon's writings were early and well known among the French philosophers. 'While Des Cartes,' says Baillet, 'was in Paris in 1626, he heard of the death of Bacon. This news sensibly affected those who aspired to the re-establishment of true philosophy, and who knew that Bacon had been engaged in that great design for several years.'† In 1631, Des Cartes visited London, and in 1633, he writes from his retreat in Holland to Father Mersenne of Paris, that 'if any one could be prevailed upon to un-

* Bacon's Works, vol. 12, p. 222.

† La Vie de M. Des Cartes, par Baillet, tom. 1, pp. 147, 148; Ed. Phil. Trans., vol. 8, p. 414; Edinburgh Review, vol. 27, p. 226, art. ix., by sir James Mackintosh.

dertake a history of the appearances of the heavenly bodies, according to the VERULAMIAN METHOD, without the admixture of hypothesis, such a work would prove of great utility;'* and in another letter he says, 'I have little to add, respecting experiments, to what Verulam has said.' Gassendi and Peiresc,—two of the most eminent French philosophers of that day, and both friends and correspondents of Galileo,—were among the earliest disciples of the English Philosopher; and the former pronounces the reformation undertaken by Bacon a great and

* Lettres de M. Des Cartes, tom. iv., p. 210; Ed. Phil. Trans., vol. 8, p. 415; Ed. Rev. ut sup. Sir James Mackintosh, in the reviewal referred to, remarks upon the singular disrespect in which Des Cartes always spoke of the illustrious Tuscan philosopher, and accounts for it from his dread of the animosity of the church. This view is strongly confirmed by a remark of Hobbes, (who knew him well, and highly respected him for his mathematical attainments,) which Aubrey has preserved.—See Letters from the Bodleian Library, &c. vol. 2, p. 626.

heroic enterprise.* There is too the testimony of Dr. Samuel Sorbiere, who in 1660 visited England; and though in his Relation d'un Voyage en Angleterre, published four years afterwards, he has given a prejudiced account of our national character, yet admits that Bacon successfully promoted the cause of physical science.† So in 1666 the Abbé Gallois, in one of the numbers of the Journal des Sçavans, (the earliest of the French literary journals,) admits, that 'this great chancellor is one of those who have most contributed to the advancement of the

* See Napier's Diss. Ed. Phil. Trans., vol. 8, p. 417; Ed. Rev. ut sup.

† Dr. Sorbiere's book was considered 'an insolent libel on our nation,' and called forth a reply from Dr. Sprat.—See his 'Observations on Monsieur de Sorbiere's Voyage into England, Lond. 1668.' There appears also to have been another answer, printed at Amsterdam, in French.—Wood's Ath. Oxon. vol. 4, p. 728, Bliss's edit. In Mr. Southey's interesting essay on Foreign Travellers, (Essays, vol. 1, p. 258,) it is said, that for publishing this work, Sorbiere was banished by the French Government to the city of Nantes.

sciences;' and John Baptiste du Hamel, the first secretary of the Royal Academy of Sciences, founded this year, represents Bacon as the father of the inductive or experimental method; and in his treatise *De Mente Humana*, has commented at length upon the Baconian philosophy.

In Germany, too, so early as 1623, the Verulamian Method was known and appreciated; for in the introduction to Campanella's *Realis Philosophia*, published at Frankfort, in that year, Adams compares his unfortunate friend Campanella to the great Verulam, who took experience for his guide, and drew his philosophy from the book of nature.* Commenius too, in a work, published in 1643, speaks of the *Novum Organum* in the highest terms of praise;* and the historian of the *Academia Naturæ Curiosorum*, (the royal society of Germany,) which was founded in 1652, ascribes the

* Napier's Diss. Ed. Phil. Trans., vol. 8, p. 422.

spirit which produced it to the writings of Bacon. To these we may add the testimony of the celebrated Puffendorf. 'It was the late Chancellor Bacon,' says he, 'who raised the standard, and urged on the march of discovery; so that if any considerable improvements have been made in philosophy in this age, there has been not a little owing to that great man.' *

Lord Bacon's correspondence with Father Fulgentio, the Venetian philosopher, and with Baranzan, a Piedmontese monk of the order of Barnabites, shows that the fame of his philosophical writings had at a very early period extended into Italy. † So in a letter written from thence to lord Cavendish, before Bacon's death, it is said, 'lord Bacon is here more and more known, and his works more and more delighted in.' ‡

It is highly probable that Galileo was well

* See Ed. Phil. Trans., vol. 8, p. 424.

† See ante, p. 205, and Bacon's Works, vol. 13, p. 68.

‡ Rawley's Life of Bacon.

acquainted with Bacon's writings; and it appears, from a passage in one of Mr. Matthew's letters, written in 1619, when on his way to Florence, that a MS. copy of Bacon's discourse on the tides, (which was not published till several years after his death,) had been seen by the Florentine philosopher; for he endeavoured to answer it, and was about to forward his reply to Mr. Matthew; but upon being informed that his answer was founded upon a false supposition, namely, that there was in the ocean a full sea but once in the twenty-four hours, he relinquished this design.*

* Bacon's Works, vol. 12, p. 367. With some of Galileo's writings Bacon was evidently acquainted, as he refers to them more than once in his Instauration. In a letter to lord Bacon, dated Brussels, 21st April, 1616, Mr. Matthew says, 'I presume to send you the copy of a piece of a letter, which Galileo, of whom I am sure you have heard, wrote to a monk of my acquaintance in Italy, about the answering of that place in Joshua which concerns the sun's standing still, and approving thereby the pretended falsehood of Coperni-

It is impossible, we think, after reading the foregoing testimonies, and many others might be accumulated, coming from such authentic sources, and all so explicit, for any one, be he never so sceptical, to hesitate for a moment in saluting our illustrious philosopher as the father of experimental science, and in ascribing to his works the merit of having greatly accelerated the progress of

cus's opinion. The letter was written by occasion of the opposition which some few in Italy did make against Galileo, as if he went about to establish that by experiments which appears to be contrary to Holy Scripture. But he makes it appear the while by this piece of a letter which I send you, that if that passage of scripture doth expressly favour either side, it is for the affirmation of Copernicus's opinion, and for the negative of Aristotle's. To an attorney-general in the midst of a town, and such a one as is employed in the weightiest affairs of the kingdom, it might seem unseasonable for me to interrupt you with matter of this nature. But I know well enough in how high account you have the truth of things; and that no day can pass wherein you give not liberty to your wise thoughts of looking upon the works of nature.'—Ibid. 294; and see p. 368.

physical knowledge. 'It becomes interesting,' says sir David Brewster, 'to inquire whether or not the philosophers who succeeded Bacon acknowledged any obligation to his system, or derived the slightest advantage from his precepts. If Bacon,' he continues, 'constructed a method to which modern science owes its existence, we shall find its cultivators grateful for the gift, and offering the richest incense at the shrine of a benefactor whose generous labours conducted them to immortality.'* We adopt the test thus confidently proposed; and now willingly leave it to our readers to determine, whether sir David Brewster's conclusion be correct, that 'no such testimonies are to be found.'*

In resuming the narrative of lord Bacon's life, we must remind our readers that in

* Brewster's Life of Newton, p. 324; and see ante, p. 210.

1617 he was made lord Keeper,—in 1618, lord Chancellor,—and that in two years afterwards, he published his great work, the *Novum Organum*. He had completed his sixtieth year, amidst troops of friends, emulous to do honour to one who was an honour to his country, and whose fame had gone out into all lands. If at this period of his life Bacon had quitted all civil employment, and retired into the seclusion of Gorhambury, there to pursue his beloved philosophy,

> 'exhausting thought,
> And hiving wisdom with each studious year,'

he would have appeared to posterity, not only as the great ornament of his age and nation, but of human nature itself.

He, however, who had long run so brilliant a course, instead of setting in splendour, suddenly fell from his high estate,—was, by the judgment of his peers, degraded from office, heavily fined, and imprisoned in the Tower. As to what were the faults which

produced so sudden a reverse of fortune, we would willingly answer in the words which lord Bolingbroke once used on another occasion. In company with several persons who were speaking of the avarice with which the duke of Marlborough had been charged, Bolingbroke was appealed to. 'He was so great a man,' replied his lordship, 'that I have forgot his vices.' *

The fall of Bacon, however, is one of those awful lessons which never can be forgotten, and perhaps ought not. We owe it, therefore, to our readers, to lay before them a faithful but brief narrative of those proceedings which ended in lord Bacon's downfall; nor is this less due to the name and memory of that great man; for we believe, that many are content to take their opinion on this head,—not from the State Trials, but the antithesis of Pope.

The period of which we speak was cha-

* Voltaire's Letters on the English Nation, p. 58.

racterised by an eager desire on the part of the Parliament to reform those abuses which, during the reign of James and his favourites, filled the country with dissatisfaction and alarm. As the Commons refused to support the extravagance of a Prince whom they despised, the King supplied the place of subsidies by granting patents of monopoly: —a source of revenue which, from its very nature, must at length fail. In the hope of obtaining some legitimate supplies, a Parliament was summoned, which met in 1620-1.* During this eventful session, the Commons, conscious of their growing strength and eager to exert it, endeavoured to concentrate in their own body the whole judicial power of Parliament, and to employ this formidable engine in extirpating the various abuses which, under the corrupt influence of the crown, had crept into almost every department of the executive. The Upper House,

* Rymer's Fœdera, vol. 17, p. 270.

however, having interposed, the Commons adandoned their pretensions to this privilege; and the ancient plan of parliamentary impeachment was revived. The attention of the Commons was first directed to certain monopolists whose privileges were extremely oppressive and obnoxious to the people, though lucrative to the crown and its creatures. Foreseeing that some sacrifice must be made, the King and Buckingham, (whose brother was likewise deeply implicated in the abuses of those times,) acting under the advice of Williams, then dean of Westminster, determined that the monopolists should be offered up as victims to the public wrath, in the hope of diverting it from themselves.*

* 'And your lordship,' [Buckingham] said Dean Williams, 'must needs partake in the applause; for though it is known that these vermin haunted your chamber, and is much whispered that they set up trade with some little license from your honour, yet when none shall appear more forward than yourself to crush them, the discourse will come about, that these devices, which take ill, were stolen from you by misrepresentation,

As the Commons evinced a daring resolution to inquire into all sorts of abuses,—whether in church or state,—complaints now came from every quarter; and numerous committees were soon appointed for the purpose of reporting to the House on the subject of grievances. Even the judicial seat did not escape the pestilent vices of those distempered times; and, on the twelfth of March, the Commons appointed a committee for inquiring into abuses in the courts of justice. Sir John Bennet, judge of the prerogative court, and Dr. Field, bishop of Llandaff, were both impeached for bribery;* and, on the fifteenth of March, a report

when you were but new blossomed in court, whose deformities being discovered, you love not your own mistakings, but are the most forward to recall them.'—Bishop Hacket's Scrinia Reserata, p. 50, published in 1693. This is not merely a Life of Abp. Williams, but a valuable history—somewhat heavy and pedantic, it is true—of one of the most interesting and important periods in our annals.

* State Trials, vol. 2, pp. 1116, 1145.

was made by sir Robert Phillips, on behalf of this committee, alleging that two persons (Aubrey and Egerton) had presented a charge of corruption against no less a person than the lord Chancellor:—'a man,' said sir Robert, 'so endued with all parts, both of nature and art, as that I will say no more of him, being not able to say enough.'* It was afterwards moved that this business should be presented to the Lords, without exasperation, at a conference between the two Houses, which accordingly took place on the nineteenth, the Lords agreeing to enter into a speedy examination of the complaints. On the following day, the Lord Admiral (Buckingham) informed the Upper House that, by the direction of the King, he had twice visited the Chancellor, and found him, at first, very sick and heavy, but afterwards better and much comforted, he having heard that the complaint of the grievances of the Commons against him was come before their

* State Trials, vol. 2, p. 1088.

lordships, from whom he was assured of receiving honourable justice. The following letter from Bacon was then presented to the house by Buckingham, and read:—

'My very good Lords,—I humbly pray your lordships all to make a favourable and true construction of my absence. It is no feigning or fainting, but sickness both of my heart and of my back, though joined with that comfort of mind that pursuadeth me that I am not far from heaven, whereof I feel the first fruits. And because, whether I live or die, I would be glad to preserve my honour and fame, so far as I am worthy; hearing that some complaints of base bribery are coming before your lordships, my requests unto your lordships are:

'First, that you will maintain me in your good opinion, without prejudice, until my cause be heard.

'Secondly, that in regard I have sequestered my mind at this time in great part from worldly matters, thinking of my account and

answers in a higher court, your lordships will give me convenient time, according to the course of other courts, to advise with my counsel, and to make my answer; wherein, nevertheless, my counsel's part will be the least; for I shall not, by the grace of God, trick up an innocency with cavillations, but plainly and ingenuously (as your lordships know my manner is) declare what I know or remember.

'Thirdly, that according to the course of justice, I may be allowed to except to the witnesses brought against me; and to move questions to your lordships for their cross-examinations; and likewise to produce my own witnesses for the discovery of the truth.

'And lastly, that if there be any more petitions of like nature, that your lordships would be pleased not to take any prejudice or apprehension of any number or muster of them, especially against a judge, that makes two thousand orders and decrees in a year, (not to speak of the courses that have been

taken for hunting out complaints against me,) but that I may answer them according to the rules of justice, severally and respectively.

'These requests, I hope, appear to your lordships no other than just. And so thinking myself happy to have so noble peers and reverend prelates to discern of my cause, and desiring no privilege of greatness for subterfuge of guiltiness; but meaning, as I said, to deal fairly and plainly with your lordships, and to put myself upon your honours and favours, I pray God to bless your counsels and persons. And rest your lordships' humble servant,

'Fr. St. Alban, Canc. *

'March 19, 1620.'

A message was immediately sent to the Chancellor, to the effect that the Lords had received his letter, and intended to proceed in his cause, according to the right rule of justice; adding, that they should be glad

* Bacon's Works, vol. 13, p. 28; State Trials, vol. 2. p. 1099.

if he would clear his honour therein, and praying him, for that purpose, to provide for his defence. In the meantime, as it appears, the enemies of the Chancellor were actively engaged in looking out for fresh grounds of complaint, which led his lordship to say, that 'Job himself, or whosoever was the justest judge, by such hunting for matters against me, as hath been used, may for a time seem foul, especially when greatness is the mark, and accusation the game. And if this be to be a Chancellor, I think if the Great Seal lay upon Hounslow Heath, nobody would take it up.'* Certain it is, that some new charges now brought before the Commons and their committee, were grounded on testimony so suspicious, as led Mr. Meautys, a member, to observe:—'Touching the persons that inform, I would entreat this honorable house to consider, that Keeling is a common solicitor, (to say no more of him;)

* Bacon's Works, vol. 12, p. 406; and see Hacket's Scrinia Reserata, p. 51.

Churchill a guilty register, by his own confession. I know, that fear of punishment and hopes of lessening it, may make them to say much, yea more than is true. For my own part, I must say I have been a witness of my lord's proceedings. I know he hath sown the good seed of justice, and I hope that it will prove, that the envious man hath sown those tares.'*

The additional complaints to which we have alluded, were shortly afterwards laid before the Lords, who appointed a committee to continue the examinations begun by the Lower House. On the twenty-fifth of March—two days before the adjournment of both houses—Bacon communicated, through Buckingham, the following letter to the King, in which he thus expresses himself on the subject of the parliamentary proceedings:—'When I enter into myself, I find not the materials of such a tempest as is

* State Trials, vol. 2. p. 1096.

come upon me. I have been (as your Majesty knoweth best,) never author of any immoderate counsel, but always desired to have things carried "suavibus modis." I have been no avaricious oppressor of the people. I have been no haughty, or intolerable, or hateful man, in my conversation or carriage. I have inherited no hatred from my father, but am a good patriot born. Whence should this be; for these are the things that used to raise dislikes abroad.

'For the House of Commons, I began my credit there, and now it must be the place of the sepulture thereof. And yet this parliament, upon the message touching religion, the old love revived, and they said, I was the same man still, only honesty was turned into honour.

'For the Upper House, even within these days, before these troubles, they seemed as to take me into their arms, finding in me ingenuity, which they took to be the true

straight line of nobleness, without crooks or angles.

'And for the briberies and gifts wherewith I am charged, when the books of hearts shall be opened, I hope I shall not be found to have the troubled fountain of a corrupt heart, in a depraved habit of taking rewards to pervert justice; howsoever I may be frail, and partake of the abuses of the times.

'And therefore I am resolved, when I come to my answer, not to trick my innocency (as I writ to the Lords,) by cavillations or voidances; but to speak to them the language that my heart speaketh to me, in excusing, extenuating, or ingenuous confessing; praying God to give me the grace to see to the bottom of my faults, and that no hardness of heart do steal upon me, under show of more neatness of conscience, than is cause.'*

* Bacon's Works, vol. 12, p. 67.

During the recess an interview took place between the King and Bacon; and on the twentieth of April, four days afterwards, Bacon sent a letter to the King, thanking him for the access which he had vouchsafed, and expressing a hope that the lords of the Upper House would be merciful; adding these emphatic words:—'It is not possible, nor it were not safe, for me to answer particulars till I have my charge; which when I shall receive, I shall without fig-leaves, or disguise, excuse what I can excuse, extenuate what I can extenuate, and ingenuously confess what I can neither clear nor extenuate.'*

From Bacon's letters to the King, and particularly from his solemn address to the House of Lords, in which he requests to be allowed 'to except to the witnesses brought against him, and to move questions for their cross-examination, and likewise to produce

* Bacon's Works, vol. 13, p. 29.

his own witnesses,' * it is very evident that he intended to defend himself against the charges which had been brought against him. Soon after the before-mentioned interview, however, had taken place, (the design of which was attempted to be concealed by previously taking the advice of the privy council as to its expediency—a question which was at once left to the discretion of the King,) and in the face of his repeatedly expressed determination to the contrary, lord Bacon, who undeniably possessed the highest gifts of eloquence—gifts that might 'perplex and dash maturest counsels,' consented to abandon every measure of defence; and, instead of excepting to any of the witnesses, (some of whom were very exceptionable,) or moving any questions for their cross-examination, or producing any testimonies on his own behalf, submitted himself to the judgment and mercy of his peers. Now when we put together the circumstances which we

* Ante, p. 246.

have mentioned, and call to mind the state of public opinion and the principles which then influenced the counsels of the crown, there appears to be, at least, a strong presumption that Bacon's relinquishment of his defence was not a voluntary act, but the effect either of a threat or promise on the part of the government:—a threat to abandon and utterly undo him if he persisted in prosecuting his defence, which might possibly disclose some particulars unfavourable to the King and Buckingham;—a promise to retrieve his fortunes if broken by the sentence of the House of Lords. To confirm this strong antecedent presumption, there is a letter from Bacon to Buckingham, written about this time, which, we think, evidently shows that the former considered himself as a sacrifice to the safety of the King:—'I hear yesterday was a day of very great honour to his majesty,' says Bacon, 'which I do congratulate. I hope, also, his majesty may reap honour out of my adversity, as he

hath done strength out of my prosperity. His majesty knows best his own ways; and for me to despair of him, were a sin not to be given. I thank God, I have overcome the bitterness of this cup of Christian resolution, so that worldly matters are but mint and cummin.'* But to put this question beyond all possibility of doubt, there is the positive testimony of Mr. Bushell, the secretary (or servant as he was then called,) of lord Bacon; and that testimony, expressed with the utmost degree of particularity, descending even to the words used by the Chancellor,—a circumstance which renders it highly probable that the facts were communicated to his secretary by Bacon himself. 'There arose,' says Bushell, 'such complaints against his lordship, and the then favourite of court, that for some days put the King to this quere, whether he should permit the favourite of his affections, or the oracle of his

* Bacon's Works, vol. 12, p. 465.

council to sink in his service? Wherefore his lordship was sent for by the King, who, after some discourse, gave him this positive advice, to submit himself to his House of Peers, and that, (upon his princely word,) he would then restore him again, if they (in their honours) should not be sensible of his merits. Now, though my lord foresaw his approaching ruin, and told his majesty there was little hopes of mercy in a multitude, when his enemies were to give the fire, if he did not plead for himself; yet such was his obedience to him from whom he had his being, that he resolved his majesty's will should be his only law; and so took leave of him with these words:—"Those that will strike at your Chancellor, (it is much to be feared,) will strike at your crown;" and wished, that as he was then the first, so he might be the last of sacrifices. Soon after,' continues Bushell, 'according to his majesty's commands, he wrote a submissive letter to the

House;'* and, on the twenty-fourth of April, this letter was communicated to the Lords, by the Prince of Wales, afterwards Charles the First—a circumstance which confirms Bushell's statement, that this course was pursued by command of the King. We are unwilling to omit any part of so beautiful and interesting a letter, which, (says an American writer who has ably vindicated lord Bacon's character,) deserves to be read by all who would make themselves acquainted with the stores of eloquence contained in our language.†

* Bushell's Extract of his Abridgment of the Lord Chancellor Bacon's Philosophical Theory in Mineral Prosecutions,—Post-script, pp. 19, 20. This tract, which is very scarce, was published in 1660. There is a copy, bound up with several other tracts by Bushell and others on the subject of Minerals, in the library of the British Museum. An account of Mr. Bushell is given in Wood's Ath. Oxon., vol. 3, p. 1007, Bliss's edit., and by Aubrey, vol. 2, p. 260. He was famous for his mining speculations, and seems to have been an ingenious man; but, sharing the fate of most projectors, died in indigence.

† North American Review, (N. S.) for April, 1823,

'To the Right Honourable the Lords of Parliament, in the Upper House assembled.

'The humble Submission and Supplication of the Lord Chancellor.

'It may please your lordships, I shall humbly crave at your lordships' hands a benign interpretation of that which I shall now write; for words that come from wasted spirits, and an oppressed mind, are more safe in being deposited in a noble construction, than in being circled with any reserved caution.

'This being moved, and, as I hope, obtained, in the nature of a protection to all

art. xx. 'There is a kind of fraternity,' says Bacon, 'between great men that are, and those that have been, being but the several tenses of one verb;' and as time alters not this relation, neither, we would add, does space; and the English Philosopher is reverenced, not only in America, but in all civilized countries, by the wise and good.

that I shall say, I shall now make into the rest of that wherewith I shall at this time trouble your lordships a very strange entrance. For, in the midst of a state of as great affliction as I think a mortal man can endure (honour being above life,) I shall begin with the professing of gladness in some things.

'The first is, that hereafter the greatness of a judge or magistrate shall be no sanctuary or protection of guiltiness, which (in few words) is the beginning of a golden world. The next, that, after this example, it is like that judges will fly from any thing that is in the likeness of corruption (though it were at a great distance) as from a serpent; which tendeth to the purging of the courts of justice, and the reducing them to their true honour and splendour. And in these two points, God is my witness, that, though it be my fortune to be the anvil upon which these good effects are beaten and wrought, I take no small comfort.

'But, to pass from the motions of my heart whereof God is only judge, to the merits of my cause, whereof your lordships are judges, under God and his lieutenant, I do understand there hath been heretofore expected from me some justification; and therefore I have chosen one only justification instead of all other, out of the justifications of Job. For, after the clear submission and confession which I shall now make unto your lordships, I hope I may say and justify with Job, in these words: I have not hid my sin as did Adam, nor concealed my faults in my bosom. This is the only justification which I will use.

'It resteth therefore, that without figleaves, I do ingenuously confess and acknowledge that, having understood the particulars of the charge, not formally from the house, but enough to inform my conscience and memory, I find matter sufficient and full, both to move me to desert the defence, and to move your lordships to condemn and cen-

sure me. Neither will I trouble your lordships by singling those particulars, which I think may fall off,

"Quid te exempta juvat spinis de pluribus una?"

Neither will I prompt your lordships to observe upon the proofs, where they come not home, or the scruples touching the credits of the witnesses; neither will I represent unto your lordships how far a defence might, in divers things, extenuate the offence in respect of the time or manner of the gift, or the like circumstances; but only leave these things to spring out of your own noble thoughts and observations of the evidence and examinations themselves, and charitably to wind about the particulars of the charge here and there, as God shall put into your minds, and so submit myself wholly to your piety and grace.

'And now that I have spoken to your lordships as judges, I shall say a few words unto you as peers and prelates, humbly commend-

ing my cause to your noble minds and magnanimous affections.

'Your lordships are not simple judges, but parliamentary judges; you have a further extent of your arbitary power than other courts; and, if your lordships be not tied by the ordinary course of courts or precedents, in points of strictness and severity, much more in points of mercy and mitigation.

'And yet, if any thing which I shall move might be contrary to your honourable and worthy ends to introduce a reformation, I should not seek it. But herein I beseech your lordships to give me leave to tell you a story. Titus Manlius took his son's life for giving battle against the prohibition of his general; not many years after, the like severity was pursued by Papirius Cursor, the dictator, against Quintus Maximus, who being upon the point to be sentenced, by the intercession of some principal persons of the senate, was spared; whereupon Livy maketh this grave and gracious observation:

"Neque minus firmata est disciplina militaris periculo Quinti Maximi, quam miserabili supplicio Titi Manlii." The discipline of war was no less established by the questioning of Quintus Maximus, than by the punishment of Titus Manlius: and the same reason is of the reformation of justice; for the questioning of men of eminent place hath the same terror, though not the same rigour, with the punishment.

'But my case standeth not there; for my humble desire is, that his Majesty would take the Seal into his hands, which is a great downfall; and may serve, I hope, in itself for an expiation of my faults. Therefore, if mercy and mitigation be in your power, and do no ways cross your ends, why should I not hope of your lordships' favour and commiseration?

'Your lordships will be pleased to behold your chief pattern, the King our sovereign,—a king of incomparable clemency, and whose heart is inscrutable for wisdom and good-

ness. Your lordships will remember that there sat not these hundred years before a Prince in your House (and never such a prince) whose presence deserveth to be made memorable by records and acts mixed of mercy and justice: yourselves are either nobles (and compassion ever beateth in the veins of noble blood,) or reverend prelates, who are the servants of Him that would not break the bruised reed, nor quench the smoking flax. You all sit upon one high stage; and therefore cannot but be more sensible of the changes of the world, and of the fall of any of high place. Neither will your lordships forget that there are *vitia temporis* as well as *vitia hominis*, and that the beginning of reformations hath the contrary power of the pool of Bethesda; for that had strength to cure only him that was first cast in, and this hath commonly strength to hurt him only that is first cast in; and for my part, I wish it may stay there, and go no further.

'Lastly, I assure myself, your lordships

have a noble feeling of me, as a member of your own body, and one that, in this very session, had some taste of your loving affections, which, I hope, was not a lightning before the death of them, but rather a spark of that grace, which now in the conclusion will more appear.

'And therefore my humble suit to your lordships is, that my penitent submission may be my sentence, and the loss of the Seal my punishment; and that your lordships will spare any further sentence, but recommend me to his Majesty's grace and pardon for all that is past. God's holy spirit be amongst you. Your Lordships' humble servant and suppliant,

'FR. ST. ALBAN, Canc.'*

'April 22, 1621.'

This eloquent appeal, however, though presented by the King's son, failed to satisfy the House; and it was then debated

* Bacon's Works, vol. 12, p. 74; State Trials, vol. 12, p. 1102.

whether the Chancellor should be summoned to the bar to hear the charge, which consisted of twenty-eight articles, or whether it should be sent to him in writing, which last mode was agreed to,—respect being had to his person, as he still held the Great Seal. A copy of the charge was accordingly sent to the Chancellor, with the following message:—

That the lord Chancellor's confession is not fully set down by his lordship in the said submission, for three causes.

1st. His lordship confesseth not any particular bribe or corruption.

2nd. Nor showeth how his lordship heard the charge thereof.

3rd. The confession, such as it is, is afterwards extenuated in the same submission. And therefore the Lords have sent him a particular of the charge, and do expect his answer to the same with all convenient expedition.*

* For the particulars of the charge, see Bacon's

To this message the Chancellor replied, that he would return an answer with all convenient speed; which he accordingly did, having previously informed the House that he intended not to offer any manner of defence, but craving the liberty, where the charge was more full than the facts justified, of making declaration of the truth in such particulars, the charge being brief and not containing all circumstances.

On the 30th April, sir James Leigh, the lord Chief Justice, who had been commissioned to be speaker in the Upper House during the absence of Bacon, delivered to the Lords the Chancellor's confession and submission; in which document most of the articles of the charge are extenuated by showing either that the alleged gifts were of less value than stated, or that they had been received, unknown to him, by his servants,

articulate confession, too long for insertion in the text, but which is printed at length in the appended Notes and Illustrations, Note (G.)

or that they were delivered whilst no cause was pending, or advanced only as loans. Having replied to each of the articles, the Chancellor thus closes his confession:—'This declaration I have made to your lordships with a sincere mind; humbly craving, that if there should be any mistaking, your lordships would impute it to want of memory, and not to any desire of mine to obscure truth, or palliate any thing: for I do again confess, that in the points charged upon me, although they should be taken as myself have declared them, there is a great deal of corruption and neglect, for which I am heartily and penitently sorry, and submit myself to the judgment, grace, and mercy of the court. For extenuation, I will use none concerning the matters themselves; only it may please your lordships, out of your nobleness, to cast your eyes of compassion upon my person and estate. I was never noted for an avaricious man; and the apostle saith, that covetousness is the root of all

evil. I hope also, that your lordships do the rather find me in a state of grace; for that, in all these particulars, there are few or none that are not almost two years old, whereas those that have an habit of corruption do commonly wax worse and worse; so that it hath pleased God to prepare me, by precedent degrees of amendment, to my present penitency. And for my estate, it is so mean and poor, as my care is now chiefly to satisfy my debts.' *

This document having been read, a deputation of twelve lords was sent to the lord Chancellor, who, showing him his confession, told him that the Upper House conceived it to be ingenuous and full, and demanded whether he had subscribed it. Upon which he said, 'My lords, it is my act, my hand, my heart; I beseech your lordships, be merciful unto a broken reed.' This answer being reported to the House, the same de-

* See Note (G.)

putation, accompanied by the Prince, was directed to move the King to sequester the Great Seal from the lord Chancellor, which request he immediately complied with. On the following day, being the second of May, Bacon was summoned to appear before the Lords the next morning, to receive sentence; but the officers found him sick in bed, and unable to attend.* He implored the King to save him from judgment, urging, that if it be reformation which is sought, the very taking away of the Seal, upon his general submission, would be as much in example as any further severity; and it appears from Bacon's own words, that his Majesty would have 'pulled him out of the fire of a sentence.'† Such an interposition, however, was perhaps beyond his power; and certainly it did not suit either the policy of his profligate favourite, Buckingham, or the

* See Bacon's Works, vol. 13, p. 30.

† Bacon's Works, vol. 12, p. 52.

spirit which actuated the counsel of the wily Williams.

On the following day the Lords proceeded to judgment, which was delivered in these terms:—

1. That the lord Viscount St. Alban, Lord Chancellor of England, shall undergo fine and ransom of forty thousand pounds.

2. That he shall be imprisoned in the Tower during the King's pleasure.

3. That he shall for ever be incapable of any office, place, or employment, in the state or commonwealth.

4. That he shall never sit in Parliament, nor come within the verge of the court.' *

This severe sentence, founded on his own confession, forms that blot upon the character of Bacon which some would fain treat as a mere 'paltry libel,' and others, as a crime which made him the 'meanest of

* State Trials, vol. 2, p. 1113. See Note (H.)

mankind.'* No one, we think, who calmly and dispassionately considers the proceedings in this memorable trial, and, together with an unprejudiced spirit and judgment, possesses a full knowledge of the moral and political history of those times, will be disposed to adopt either of these extreme opinions. We do not hesitate to say,—an opinion not hastily formed, but deliberately and after much reflection,—that Bacon was guilty of practices which ought not to be tolerated in any court of justice; and so transcendently important to the well-being of any country is the pure administration of its laws, that to obtain it, there is hardly any price too great to be given. Still there are certain considerations in extenuation of lord Bacon's offence which ought not to be overlooked, and which, if duly weighed, will tend

* 'If parts allure thee, think how Bacon shin'd,
The wisest, brightest, meanest of mankind.'

POPE, Essay on Man.

to rectify those extravagant notions of his guilt, taken up by many an unthinking reader, upon no better ground, we verily believe, than the well-known antithesis of Pope,—who, whatever may be his merits as a poet, did not evince much moral discrimination when, in the same poem in which lord Bacon is held up to everlasting scorn, he crowns with all honour the abandoned Bolingbroke.

In the first place, then, we would observe, that all our knowledge of Bacon's guilt is derived from *ex parte* evidence. He was not confronted with his accusers—never cross-examined any of the witnesses against him—never adduced any on his own behalf. It is true he gave up his defence, and delivered in a confession upon which the judgment of his peers was avowedly grounded. But we have shown,* upon most undeniable evidence —positive as well as presumptive—that this

* Ante, pp. 252—256.

confession was not his own spontaneous act, but made by order of the King. Besides, if the confession itself be narrowly examined, we shall find, (as already observed,*) that most of the articles are palliated, or excused, or shown to be different than as alleged in the charge; and it is plain, (as an able writer remarks,) that Bacon could have gone much further in this way, but for the miserable dilemma in which he was placed.†

Again, we ought not to estimate the crime of which lord Bacon was convicted, by a standard inapplicable to the age in which he lived. 'It had been a practice,' says Carte,‡ 'perhaps from the times that our Kings had ceased to take money for the purchase of writs to sue in their courts, for suitors to make presents to the judges, who sate in them, either at new year's tide, or

* Ante, p. 267.

† North American Review (N. S.) for April, 1823, art. xx.

‡ Vol. 4. p. 73.

when their causes were on the point of coming to an hearing: it was a thing of course, not considered in the nature of a bribe, being universally known, and deemed an usual or honorary perquisite.' In the course of Bacon's trial, Mr. Alford, an eminent member of the House of Commons, observed, that in the legyer-book of his family, there were entries of thirty shillings, paid to a secretary, and ten pounds to a lord Chancellor for his pains in hearing a cause, and that, in his opinion, such gratuities were customary.* The extent of this practice of receiving presents may be partly estimated by the following extract from Miss Aikin's Account of the Reign of Elizabeth—'an authority,' says the writer from whom we borrow the quotation, 'the less suspicious, as that lady has exercised her gifts with great diligence against lord Bacon':—'The ministers of a sovereign, who scrupled not

* Journals of the Commons, I, 573.

to accept of bribes from parties engaged in law suits, for the exertion of her own interest with the judges, could scarcely be expected to exhibit much delicacy on this head. In fact, the venality of the court of Elizabeth was so great, that no public character appears even to have professed a disdain of the influence of gifts and bribes; and we find lord Burleigh inserting the following among rules moral and prudential, drawn up for the use of his son Robert, when young:—"Be sure to keep some great man thy friend, but trouble him not for trifles. Compliment him often. Present him with many, yet small gifts, and of little charge. And if thou have cause to bestow any great gratuity, let it be some such thing as may be daily in his sight." Miss Aikin then quotes the following letter of Hutton, archbishop of York, to the lord treasurer Burleigh: 'I am bold at this time to inform your lordship, what ill success I had in a suit for a pardon for Miles Dawson, semi-

nary priest, whom I converted wholly the last summer from popery. Upon his coming to church, receiving the holy communion, and taking the oath of supremacy, I and the council here, about Michaelmas last, joined in petition to her majesty, for her gracious pardon, and commended the matter to one of the masters of requests, and writ also to Mr. Secretary to further it, if need were, which he willingly promised to do. In Michaelmas term nothing was done; and therefore in Hilary Term, I being put in mind, that all was not done in that court for God's sake only, sent up twenty French crowns of mine own purse, as a remembrancer of the poor man's pardon, which was thankfully accepted of.'*

* 'It was usual,' says Barrington, in his Observations on Magna Charta, p. 22, 'to pay fines anciently for delaying law proceedings even to the extent of the defendant's life; sometimes they were paid to expedite process and to obtain right; and in some cases, the parties litigant offered part of what they were to recover to the crown. Madox, in his History of the Exchequer,

Again, it should be observed, that although lord Bacon was punished for bribery and *corruption,* yet, if by corruption we mean the giving of unrighteous judgments, then assuredly (as Bacon most solemnly protested,) he was not guilty of that crime. Soon after the appointment of Williams, dean of Westminster, to be lord Keeper, all the orders of his predecessor supposed to have been corruptly made, were referred to him by the Parliament to be reviewed;* and after undergoing the severe scrutiny of one who

collects, likewise, many instances of fines for the King's favour; and particularly of the dean of London's paying twenty marks to the King, that he might assist him against the bishop, in a law suit. William Stutevill presented to king John three thousand marks, for giving judgment with relation to the barony of Mowbray, which Stutevill claimed against William de Mowbray.' And from Burnet we learn, that Charles the Second, whilst appeals were hearing in the House of Lords, used to go about and solicit particular lords, for appellant or respondent.—Barrington's Observations on Ancient Statutes, p. 23.

* Hacket's Scrinia Reserata, p. 53.

undoubtedly was no friend to Bacon, and possibly his greatest enemy, (for we strongly suspect that he counselled the King or Buckingham to compel lord Bacon to abandon his defence and make submission,) yet we are assured by Rushworth—himself a barrister—that 'though gifts rendered him suspected for injustice, yet never any decree made by him was reversed as unjust, as it hath been observed by some knowing in our laws.'* It is likewise affirmed by

* Rushworth's Historical Collections, vol. 1, p. 31. Having adverted to the complaint, made in king James's reign, that there did not exist any appeal from chancery, Carte, the historian, informs us that 'this grievance (if it were one,) was soon redressed by the House of Lords, to which the discontented suitors, enraged at the loss of their causes, applied for relief against Bacon's decrees, as supposed to be made by corruption; but *they were found too just to be reversed*, and these first precedents seemed to establish that House's jurisdiction in receiving and determining appeals from the Court of Chancery.'—Carte's Hist. of England, vol. 4, p. 77. This work is the foundation of Hume's more elegant and philosophical, but not more authoritative and authentic, history.

Aubrey, (who may be considered a contemporary observer, for he was the friend of Hobbes,) that 'his lordship always gave judgment *secundum æquum et bonum*. His decrees in chancery stand firm, and there are fewer of his decrees reversed, than of any other Chancellor.'*

We would finally observe, that Bacon suffered much from the exactions of certain of his secretaries and servants, who enriched themselves at the expense of their illustrious master, and his good name.† This formed

* Letters from the Bodleian Library, &c., vol. 2, p. 226.

† Three of his lordship's servants, says Aubrey, kept their coaches, and some kept race-horses. His servant, Hunt, left an estate of one thousand pounds per annum in Somerset. Bacon was wont to say to this servant, (who was a notable thrifty man, and loved this world, and the only servant he had that he could never get to become bound for him,) 'the world was made for man (Hunt) and not man for the world.' Upon his being in disfavour, his servants suddenly went away, and he compared them to the flying of the vermin when the house was falling.—Vol. 2, pp. 223, 226.

one of the articles of charge against him, to which he ingenuously replied,—'I confess, it was a great fault of neglect in me, that I looked no better to my servants.' In allusion to this, when some of his servants rose up as he passed through his hall, he said, with that sort of bitter pleasantry in which a breaking heart will sometimes seek relief, 'Sit down, my masters,—your rise hath been my fall.'*

The foregoing facts warrant us, we think, in concluding, that though Bacon (to use his own inimitable language,) was frail, and partook of the abuses of the times, yet

* 'Ill was thy fate, illustrious Bacon! frail
E'en though thou wert; (and who of human-kind
Dares boast that he is free from frailty?)—thou,
Glory pursuing, wert perchance a prey
To confidence betray'd!—Imps, who with pale
Dissimulation, while thy mighty mind,
Intent on inward light, no outward brow
Could spare of circumspection, stole away
By foul corruption that great name, whose tale
Has filled the world with pity and with scorn.'
GNOMICA, ch. cxxviii.

he had not the troubled fountain of a corrupt heart, in a depraved habit of taking rewards to *pervert* justice. 'There are,' says he, '*vitia temporis* as well as *vitia hominis*, and the beginning of reformations hath the contrary power of the pool of Bethesda, for that had strength only to cure him that was first cast in, and this hath strength to hurt him only that is first cast in.'*

'I have been often told,' says Bacon, 'by many of my lords, (as it were, in excusing the severity of the sentence,) that they knew they left me in good hands.'† The sentence was, in fact, rendered almost nominal. After two days' imprisonment in the Tower,‡

* Ante, p. 264.

† Bacon's Works, vol. 12, p. 53.

‡ The following letter, (vol. 12, p. 490,) written by Bacon whilst in the Tower to the Marquis of Buckingham, will be read with painful interest. To our mind, it is an additional confirmation of Bushell's statement, given in a former page:—'Good my lord—Procure the warrant for my discharge this day. Death, I thank God, is so far from being unwelcome to me, as I have called for it (as Christian resolution would permit,) any

Bacon was allowed the use of sir John Vaughan's house at Parson's Green, Fulham, for which he thus expresses his thanks, in a letter to the Prince:—'I am much beholden to your highness's worthy servant, sir John Vaughan, the sweet air and loving usage of whose house hath already much revived my languishing spirits; I beseech your highness thank him for me;'* and on the fourth of

time these two months. But to die before the time of his majesty's grace, and in this disgraceful place, is even the worst that could be; and when I am dead, he is gone that was always in one tenor, a true and perfect servant to his master, and one that was never author of any immoderate—no, nor unsafe,—no (I will say it,) nor unfortunate counsel; and one that no temptation could ever make other than a trusty, and honest, and Christ-loving friend to your lordship; and (howsoever I acknowledge the sentence just, and for reformation's sake fit,) the justest Chancellor that hath been in the five changes since sir Nicholas Bacon's time. God bless and prosper your lordship, whatsoever become of me. Your lordship's true friend, living and dying,

'Tower, 31st May, 1621. 'Fr. St. Alban.'

* Bacon's Works, vol. 13, p. 31.

June, he thus writes to the King:—'I humbly thank your majesty for my liberty, without which timely grant any farther grace would have come too late. But your majesty, that did shed tears in the beginning of my trouble, will, I hope, shed the dew of your grace and goodness upon me in the end. Let me live to serve you, else life is but the shadow of death to your majesty's devoted servant.'* The promptness with which Bacon was released from the Tower, seems to have given much offence to those who were inimical to Buckingham;† and it is likely that this deterred the King from at once granting him a full pardon. In June he was allowed to retire to his house at Gorhambury, passing, in that retreat, nearly the whole of the ensuing autumn and winter, much, as it appears, to his discomfort. 'Here,' said he, 'I live upon the sword-point of a sharp air, endangered if I go

* Bacon's Works, vol. 13, p. 32.

† Cabala, Lett. 2.

abroad, dulled if I stay within, solitary and comfortless without company, banished from all opportunities to treat with any to do myself good, and to help out any wrecks; and that, which is one of my greatest griefs, my wife, that hath been no partaker of my offending, must be partaker of this misery of my restraint.'* In September, the King remitted the fine of forty thousand pounds, signing a warrant for its

* Bacon's Works, vol. 12, p. 413. In the hope of being released from this confinement, and allowed to return to London, 'where,' says he, 'I could have company, physicians, conference with my creditors and friends about my debts and the necessities of my estate, helps for my studies, and the writings I have in hand,' he prepared a petition for the House of Lords, which concludes with the following striking passage:—'Herein your lordships shall do a work of charity and nobility; you shall do me good; you shall do my creditors good; and it may be, you shall do posterity good, if out of the carcass of dead and rotten greatness, as out of Samson's lion, there may be honey gathered for the use of future times.'—Bacon's Works, vol. 12, pp. 413, 414; and see his letter to Buckingham, vol. 12, p. 421: see also p. 414.

assignment to some of his friends, by way of protecting him to that amount from his creditors, to whom he is said to have paid eight thousand pounds after his fall.* Writing to the King, 'my own means,' says Bacon, 'through mine own improvidence, are poor and weak, little better than my father left me. The poor things which I have had from your majesty, are either in question or at courtesy: my dignities remain marks of your past favours, but yet burthens withal of my present fortune. The poor remnants which I had of my former fortunes, in plate or jewels, I have spread upon poor men, unto whom I owed, scarce leaving myself bread. Help me,' adds the fallen Chancellor, broken in health and fortune, with pinching poverty at his door, and his grey hairs brought down with sorrow almost to the grave,—'Help me, and pity me so far, as I that have borne a bag, be not now in my age forced in effect

* General Historical and Critical Dictionary, vol. 2, p. 560; and see Bacon's Works, vol. 12, p. 411.

to bear a wallet; nor I, that desire to live to study, may not be driven to study to live.'* In the following month of October he received the King's pardon, which did not permit him, however, to come within the verge of the court, nor did it include the fine. This last exception, which was designedly

* Bacon's Works, vol. 12, p. 51. In the same letter he says, 'This theme of my misery is so plentiful, as it need not be coupled with any thing else. I have been somebody, by your majesty's singular and undeserved favour,—even the prime officer of your kingdom. Your majesty's arm hath been often over mine in council, when you presided at the table, so near I was. I have borne your majesty's image in metal, much more in heart. I was never, in nineteen years' service, chidden by your majesty, but contrariwise, often overjoyed, when your majesty would sometimes say, "I was a good husband for you, though none for myself;" sometimes, "That I had a way to deal in business suavibus modis, which was the way which was most according to your own heart;" and other most gracious speeches of affection and trust which I feed on till this day. But why should I speak of these things which are now vanished, but only the better to express the downfall.'

made in order to save Bacon from the present importunity of his creditors, called forth a remonstrance from the lord Keeper Williams, who staid the pardon, (until commanded to pass it,) on the ground, that if it were sealed before the approaching assembly of Parliament, it would be prejudicial to the service of the King, to the honour of his lord of Buckingham, and especially to his own judgment and fidelity.*

In March, 1621-2, Bacon was permitted to leave Gorhambury, yet he did not return to York House, but much against his own and lady Bacon's inclination, retired to a house which he had taken at Chiswick.† To York House Bacon seems to have been

* See Bacon's letters on this subject, vol. 13, p. 34, and vol. 12, p. 212.

† Bacon's Works, vol. 12, pp. 428, 429. In a letter to the lord Treasurer, written in March, 1621-2, he says, 'Purposing to be at Chiswick, where I have taken a house, within this sevennight, I hope to wait upon your lordship, and *to gather some violets in your garden*, &c.—Ib. p. 428.

much attached. 'It is the house,' said he, 'wherein my father died, and wherein I first breathed; and there will I yield my breath, if so please God, and the King will give me leave; though I be now by fortune (as the old proverb is,) like a bear in a monk's hood. At least no money, no value, shall make me part with it.'* Buckingham, (to whom, be it remembered, Bacon had been a true friend, both 'in the watery trial of prosperity, and in the fiery trial of adversity,' †) cruelly endeavoured to wrest from him a spot made dear by early associations, but not succeeding, considered himself ill-used by Bacon, who in consequence lost his favour. ‡ This seems to have been one cause, at least, of Bacon's not then receiving a full pardon. 'If York House,' said sir Edward Sackville, in a letter to Bacon, § 'were gone, the town

* Bacon's Works, vol. 12, p. 420.

† Ib. p. 273.

‡ Ib. pp. 273, 426, 432, 433.

§ Ib. p. 432.

were yours, and all your straitest shackles cleared off, besides more comfort than the city air only. I have told Mr. Meautys how I could wish your lordship to make an end of it. From him, I beseech you, take it, and from me only the advice to perform it. If you part not speedily with it, you may defer the good, which is approaching near you, and disappointing other aims, (which must shortly receive content, or never,) perhaps anew yield matter of discontent, though you may be indeed as innocent as before.' The great lords,' said Mr. Meautys,* 'long to be in York House; I know your lordship cannot forget they have such a savage word among them as *fleecing*.' York House was soon afterwards sold, and, with the consent of Buckingham, passed, we believe, into the possession of lord treasurer Cranfield.†

* Bacon's Works, vol. 12, pp. 429, 436.

† See Bacon's letter on the coarse usage he had re-

On the 20th of March, 1621-2, lord Bacon wrote to the King, thanking him for having been pleased to grant him that which the civilians say, is *res inæstimabilis*—his liberty; 'so that now,' he adds, 'whenever God calleth me, I shall not die a prisoner; nay, further, your majesty hath vouchsafed to rest a second and iterate aspect of your eye of compassion upon me, in the referring the consideration of my broken estate to my good lord, the Treasurer, which as it is a singular bounty in your majesty, so I have yet so much left of a late Commissioner of your Treasure, as I would be sorry to sue for any thing that might seem immodest. These your majesty's great benefits, in casting your bread upon the waters, as the Scripture saith, because my thanks cannot any ways be sufficient to attain, I have raised your progenitor of famous memory, and now

ceived from this person, (vol. 12, p. 437,) who means, says he, 'to coax me (it is his own word of old,) and to saw me asunder.'

I hope of more famous memory than before, King Henry VII. to give your majesty thanks for me; which work, most humbly kissing your majesty's hands, I do present. And because in the beginning of my trouble, when in the midst of the tempest I had a kenning of the harbour, which I hope now, by your majesty's favour, I am entering into, I made a tender to your majesty of two works,—a History of England, and a Digest of your Laws; as I have by a figure of *pars pro toto* performed the one, so I have herewith sent your majesty, by way of an epistle, a new offer of the other; but my desire is farther, if it stand with your majesty's good pleasure, since now my study is my exchange, and my pen my factor for the use of my talent, that your majesty, who is a great master in these things, would be pleased to appoint me some task to write, and that I should take for an oracle. And because my Instauration, which I esteem my great work, and do still go on with in silence, was dedicated to your ma-

jesty, and this History of King Henry VII. to your lively and excellent image the Prince, if now your majesty will be pleased to give me a theme to dedicate to my lord of Buckingham, whom I have so much reason to honour, I should with more alacrity embrace your majesty's direction than my own choice.'*

When Bacon had completed the manuscript of his History of Henry VII., he put it into the hands of sir John Danvers, an old and faithful friend, desiring his opinion of it: 'Your lordship,' said sir John, 'knows that I am no scholar.' 'No matter,' replied Bacon, 'I know what a scholar can say; I would know what *you* can say.' Sir John read it, and gave his opinion as to what he misliked, which his lordship acknowledged to be true, and mended it accordingly, at the same time remarking to his friend,—'Why a scholar would never have told me

* Bacon's Works, vol. 13, p. 36.

this.'* During the period of his retirement (the last five years of his life,) he assiduously pursued his literary and philosophical labours, composing, in addition to the History of Henry VII., not less than eight works on subjects connected with natural philosophy, a treatise on the war with Spain, together with several other pieces, including a translation of certain Psalms into English verse, styling them, in his dedication to 'his very good friend, Mr. George Herbert, a poor exercise of his sickness.'†

An anecdote of this period of Bacon's life, preserved in the Baconiana by Abp. Tennison, who had it from Dr. Rawley, is too interesting an illustration of lord Bacon's

* Aubrey, vol. 2, p. 222. Aubrey received this relation from sir John Danvers himself.

† Bacon's Works, vol. 7, p. 98. For a list of lord Bacon's writings, see Mallet's Life, p. 169, and Mr. Montagu's Prefaces to his edition of Bacon's Works.

strength of mind — a quality which some deny that he possessed — to be omitted. One day his lordship was dictating to Dr. Rawley some of his experiments in the Sylva. The same day he had sent a friend to court, to receive for him a final answer, touching the effect of a grant which had been made him by king James. He had hitherto only hope of it, and hope deferred, and he was desirous to know the event of the matter, and to be freed, one way or other, from the suspense of his thoughts. His friend returning, told him plainly, that henceforth he must despair of that grant, how much soever his fortunes needed it. 'Be it so,' said his lordship, and then he dismissed his friend very cheerfully, with thankful acknowledgments for his services. His friend being gone, he came straightway to Dr. Rawley, and said to him, 'Well, sir, yon business won't go on; let us go on with this in our power;' and then he dictated to him afresh for some hours, without the least hesitancy

of speech or discernible interruption of thought.

It was, probably, about this time that Bacon composed the following verses, which, for condensed thought and pointed brevity of expression, are, perhaps, unrivalled. The melancholy representation which he gives of human life doubtless borrowed some of its darker shades from his own unhappy career. These verses, (as we learn from Aubrey,*) were first printed in Farnaby's Ανθολογία, together with a Greek version in rhyme by that once celebrated man, who was, says Anthony Wood, 'the chief grammarian, rhetorician, poet, Latinist, and Grecian of his time.' We quote from the edition of 1650, which bears the following title:—Η τῆς ἀνθολογίας Ανθολογία—*Florilegium Epigrammatum Græcorum, eorumque Latino versu à variis redditorum.*

* Vol. 2, p. 224. A copy was found among the papers of sir H. Wotton, and printed, with some slight variations, in his *Reliquiæ.*

Huc elegantem V. C L. Domini Verulamij παρῳδίαν adijcere adlubuit.

The world's a bubble, and the life of man
lesse then a span,
In his conception wretched, from the wombe,
so to the tombe:
Curst from the cradle, and brought vp to yeares,
with cares and feares.
Who then to fraile mortality shall trust,
But limmes the water, or but writes in dust.

Yet since with sorrow here we liue opprest:
what life is best?
Courts are but only superficiall scholes
to dandle fooles.
The rurall parts are turn'd into a den
of sauage men.
And where 's a city from all vice so free,
But may be term'd the worst of all the three?

Domesticke cares afflict the husband's bed,
or paines his head.
Those that liue single take it for a curse,
or doe things worse.
Some would haue children, those that haue them, mone
or wish them gone.
What is it then to haue or haue no wife,
But single thraldome, or a double strife?

Our owne affections still at home to please,
is a disease,
To crosse the sea to any foreine soyle,
perills and toyle.
Warres with their noyse affright vs: when they cease,
W' are worse in peace.
What then remains? but that we still should cry,
Not to be borne, or being borne to dye.

Quam παρῳδίαν è nostrati bonâ nos Græcam qualemcunq; sic fecimus, & rhythmicè.

Κόσμος πομφολυγηρὸς, ἀνὴρ τάλας, ἀνδρὸς ὁ αἰὼν
Μῆκος ἔχει σωιθαμαῖον.
Σχέτλιος ὧν δὲ κύημ', ἀπὸ γαστέρος ὠμοτόκοιο,
Χ' οὕτως μέχρι τάφοιο.
Σπαργανίων παρ' ἐπάρατος, ἐν στυγεροῖσι γόοισι
Τρεφθεὶς, ἐν τε φόβοισι.
Ος τ' οὖν τῶ θνητῶ ψαθυρῶ πίστιν παραθήσει
Εἰς ὕδωρ γράψει, κούφω κονίω τ' ὑποχρήσει.

Αλλ' ὁτι οὖν τάλανες καὶ ὀϊζυροὶ ἔνθα βιῶμεν,
Πῶς βίοτον διαγῶμεν;
Γυμνάσιον πέλεται φλυάρου ληρώδεος αὐλὴ
Καὶ μωροτρόφος αὐγή.
Χωρία καὶ ἄγροι σπέος ἀνδρῶν εἰσὶν ἀγρόικων
Ωμοφρόνων τε μετοικῶν.
Τῶν δὲ τριῶν ζητῶν εὑρήσεις ἄστυ κάκιστον
Μηστὸν ἀτασθαλίας, ἄδικον, δολερὸν κ' ἀθέμιστον.

Τὴν γαμικὴν ἐυνὴν οἰκεῖα μέριμνα βιάζει,
Ἡ κεφαλὴν ἀνιάζει.
Οι μὲν πῆμα πάθοσ' ἀγάμητοι κηδιάνειρον,
Ητ' ἀναδρῶσι τι χεῖρον.
Τέκνα, πόνοι· πήρωσις, ἄπαις βίος. ἔνθ' ὀλοφυρμὸς,
Ἐνθά δε πικρὸς ὀδυρμὸς.
Αλλο τὶ οὖν γαμικὸς βίος ἔιχεν ἀπειρόγαμός τε,
Πλὴν ἁπλῆς μὲν δουλοσύνης, διπλῆς ἔριδός τε;

Οἴκοι ἀεὶ μεῖναι πολλοῖς νόσον ὧρσε βαρεῖαν,
Καὶ δακέθυμον ἀνίαν.
Νωθ' ἁλὸς ὑγρὰ ταμεῖν, λείποντα πάτρης πολίεθρον
Κίνδυνος ἐστ' ἐπ' ὄλεθρον.
Εκπλήττει πολέμοιο βοὴ· αὖτ' ἐν εἰρήνῃ
Δεινοτέρ' ἐστὶ γαλήνη.
Ην ἄρα τοῖν δυοῖν ἑνὸς αἵρεσις, ἢ τὸ γενέσθαι
Μηδ' ἔποσ', ἤτοι αὐτίκα τικλόμενον θανέεσθαι.

In March, 1622-3, Bacon returned to his old lodgings in Gray's Inn, and the death of Mr. Murray, provost of Eton, happening soon afterwards, he applied to the King for the vacant provostship, as a cell to retire into, not doubting that he should make both the college and school to flourish. 'There will hardly fall,' said he, 'especially in the spent hour-glass of my life, anything so fit for me, being a retreat to a place of study so near London, and where (if I sell my house at Gorhambury, as I purpose to do, to put myself in some convenient plenty,) I may be accommodate of a dwelling for summer-time.'* The provostship, however, though promised to sir William Becher by Buckingham, was given to sir Henry Wotton, who had, says good Isaac Walton, for many years rolled the restless stone of a state employment.†

* Bacon's Works, vol. 12, p. 440, 443.

† Walton's Life of Wotton, prefixed to the *Reliquiæ Wottonianæ*, and printed in Wordsworth's Ecclesiastical Biography, vol. 5, pp. 3—67.

Bitterly feeling the disgrace of the parliamentary sentence, Bacon earnestly endeavoured to obtain a *total* remission of it, so that he might not die in dishonour. 'The good,' said he,* 'which the commonwealth might reap of my suffering, is already inned. Justice is done; an example is made for reformation; the authority of the House for judicature is established. There can be no farther use of my misery. Time hath turned envy into pity.' His appeal to king James, in July, 1624, is expressed in terms so painfully pathetic, that no one, we think, who has any feeling, or any sympathy for fallen greatness, can read it without emotion:—'I prostrate myself,' said Bacon, 'at your majesty's feet—I, your ancient servant, now sixty-four years old in age, and three years and five months old in misery. I desire not from your majesty means, nor place, nor employment; but only, after so long a time

* Bacon's Works, vol. 12, pp. 456, 463.

of expiation, a complete and total remission of the sentencce of the Upper House, to the end that blot of ignominy may be removed from me, and from my memory with posterity, that I die not a condemned man. This my most humble request granted, may make me live a year or two happily; and denied, will kill me quickly.'* Shortly afterwards, the King granted him a full pardon of the whole sentence,† and he subsequently received his writ for Parliament, but by reason of his broken health was unable to attend.

His life, indeed, was now rapidly drawing to an end. In the spring of 1626, whilst taking the air in his coach, in the neighbourhood of Highgate, accompanied with Dr. Witherborne, the King's physician, it suddenly occurred to Bacon—there being snow upon the ground—to try the experiment, whether flesh could be preserved in snow. Accordingly, he and his companion forthwith

* Bacon's Works, vol. 12, p. 72.

† Ib. vol. 13, p. 70.

alighted, went into a poor woman's house at the bottom of Highgate hill, and bought a hen; and having made the woman exenterate it, they stuffed the body with snow, lord Bacon himself assisting. The snow so chilled him, that he immediately fell extremely ill, and could not return to his lodgings at Gray's Inn, but was carried to the earl of Arundell's house at Highgate, and there put into a warmed bed, which is said, however, to have been damp, not having been used for a year before.* From this place he sent the following (his last) letter to the earl of Arundel and Surrey:—

'My very good lord,—I was likely to have had the fortune of Cajus Plinius the elder, who lost his life by trying an experiment about the burning of the mountain Vesuvius. For I was also desirous to try an experiment or two, touching the conservation and induration of bodies. As for the experiment

* Aubrey, vol. 2, p. 227. He had his information from Hobbes.

itself, it succeeded excellently well; but in the journey (between London and Highgate,) I was taken with such a fit of casting, as I know not whether it were the stone, or some surfeit, or cold, or indeed a touch of them all three. But when I came to your lordship's house, I was not able to go back, and therefore was forced to take up my lodging here, where your house-keeper is very careful and diligent about me, which I assure myself your lordship will not only pardon towards him, but think the better of him for it. For indeed your lordship's house was happy to me; and I kiss your noble hands for the welcome which I am sure you give me to it.

'I know how unfit it is for me to write to your lordship with any other hand than my own; but by my troth, my fingers are so disjointed with this fit of sickness, that I cannot steadily hold a pen.'*

* Bacon's Works, vol. 12, p. 274.

In a few days after dictating this letter, lord Bacon breathed his last. 'He died,' says Dr. Rawley—who boasted of having been his first and last chaplain—'on the ninth day of April, in the year 1626, in the early morning of the day then celebrated for our Saviour's resurrection, in the sixty-sixth year of his age, at the earl of Arundell's house in Highgate, near London, to which place he casually repaired about a week before, God so ordaining that he should die there of a gentle fever, accidentally accompanied with a great cold, whereby the defluxion of rheum fell so plentifully upon his breast, that he died of suffocation.'

From this account it appears, that the malady which so rapidly brought Bacon to the grave, was an inflammation of the air-cells of the lungs, now called '*bronchitis*.' This disease (the pathology of which was then not understood,) most commonly occasions the death of old persons. In cases of this

sort, the proximate cause of death is, that the blood ceases to be either decarbonised or oxyginated, owing to the air-cells being, as it were, plastered over with a mucous, secreted by the membrane lining them, and which the debilitated patient is unable to expectorate.

He was buried near his mother in St. Michael's Church, St. Albans, according to his own express desire; and a monument of white marble, executed by an Italian artist, representing him in full portraiture, in his accustomed attitude of contemplation, with an inscription composed by sir Henry Wotton, was erected to his memory by his tried friend and secretary, sir Thomas Meautys,* who faithfully adhered to him through all his misfortunes; and, when dead, was laid at his master's feet.

* A beautiful engraving of St. Michael's Church and of Bacon's monument, is given in Mr. Montagu's edition of his works.

By his will, Bacon directed, that after his debts and legacies had been fully satisfied, the surplus should be laid out in the purchase of so much land of inheritance, as would be sufficient for the purpose of erecting and endowing two lectureships in natural philosophy and the sciences connected therewith, in either of the Universities, to be established by the advice of the bishops of Lincoln and Coventry. He had before imparted his intention to the bishop of Lincoln, in December, 1625, who highly approved of the plan, calling it 'a great and noble foundation, and a foot that would teach the age to come, to guess, in part, at the greatness of that Herculean mind which gave it existence.'* Lord Bacon's estate, however, was too much encumbered to realize so noble a design.

As to his person, concerning which the reader will naturally feel some curiosity, he

* Bacon's Works, vol. 15, p. 43.

is described by those who knew him well,* as of a middling stature; he had a spacious forehead, and piercing eye of a delicate, lively, hazel colour, which Dr. Harvey, the celebrated discoverer of the circulation of the blood, compared to the bright, beautiful eye of a viper; his countenance was indented, as if with age, before he was old; his presence was grave and comely.

He was noted for his lively wit and a marvellously strong and active memory. One of his contemporaries observes,† that his most casual talk deserved to be written, adding (as an illustration of his various knowledge) that he had heard him entertain a country lord in the proper terms relating to hawks and dogs, and at another time out-cant a London surgeon. He delighted, whilst meditating, to have music in the next room;

* Wilson's Life and Reign of James, in Bp. Kennet's Hist. vol. 2, p. 736; Aubrey, vol. 2, p. 226; Evelyn on Medals, p. 340.

† Osborn's Works, p. 137, (tenth edit.)

and, according to the season of the year, had his table strewed with sweet herbs and flowers, which, he said, refreshed his spirits and memory. In spring-time, when it rained, he would ride out in his open coach, to receive the benefit of irrigation, which, he was wont to say, was very wholesome, because of the nitre in the air; and not to omit even the most trifling peculiarity of so great a man, we may mention, that, before going to bed, Bacon would often drink a good draught of strong March-beer, to lay his working fancy asleep, which otherwise would keep him awake the greater part of the night.* Concerning his diet and the regimen of his health, Dr. Rawley, his chaplain, has observed, that, in his younger years, he used the finer and lighter sorts of meat, as fowls and such like; but afterwards preferred those of a stronger, more juicy, and nutritious nature. Every morning for

* Aubrey, vol. 2, pp. 223, 226, 235.

thirty years before his death, he took three grains of nitre in thin warm broth; and for physic, he commonly used, immediately before dinner or supper, a maceration of rhubarb infused into a draught of white wine and beer. His recipe for the gout, to which he refers in the first century of his Sylva Sylvarum, § 60, seldom failed him as a remedy. *

Of the esteem in which Bacon was held by his contemporaries, no particular testimonies need be given; for, as Aubrey emphatically observes, *All that were great and good loved and honoured him.* 'He is destined,' says one whose splendid genius and scientific attainments entitled him to speak

† See this recipe in Bacon's Works, vol. 7, p. 237, which differs very much from that used by his own physician, the celebrated Dr. Harvey; who, when he was troubled with the gout, 'would sit with his legs bare, if it were frost, on the leads of Cockaine house, put them into a pail of water, till he was almost dead with cold, and then betake himself to his stove, and so 'twas gone.'—Aubrey, vol. 2, p. 384.

with authority,*—'He is destined, if indeed any thing in the world be so destined, to remain an *instantia singularis* among men, and as he had no rival in the times which are past, so is he likely to have none in those which are to come. Before any parallel to him can be found, not only must a man of the same talents be produced, but he must be placed in the same circumstances; the memory of his predecessor must be effaced, and the light of science, after being entirely extinguished, must be again beginning to revive. If a second Bacon is ever to arise, he must be ignorant of the first.'

* Professor Playfair.

NOTES

AND

ILLUSTRATIONS.

NOTES AND ILLUSTRATIONS.

NOTE (A.) P. 12.

In the third volume of his Commentaries, sir William Blackstone observes, that 'the first king's counsel, under the degree of serjeant, was sir Francis Bacon, who was made so, honoris causa, WITHOUT patent or FEE; *so that* the first of the modern order, who are now the sworn servants of the crown, WITH a standing SALARY, seems to have been sir Francis North.' For the first position reference is made to Bacon's own letter; for the second, to Roger North's Life of the Lord Keeper. It is surprising that not one of the numerous editors of the Commentaries has ever animadverted on the erroneous statement in this passage. From the whole tenor of it, and especially from the manner in which the words '*without fee*' and '*with salary*' are used—evidently placed in opposition to each other—it is plain that the illustrious Commentator designed to convey to his readers the impression that Bacon was the *first*

king's counsel under the degree of serjeant *who did not receive a fee or salary*, and that North was the first king's counsel, under the degree of serjeant, *who did receive a salary*.

1. It is to be observed, that the only authority for the assertion that Bacon was the *first* king's counsel under the degree of serjeant, etc., is the scholastic expression '*individuum vagum*,' used in the passage which we shall presently cite; but surely this of itself is of little weight, especially when we find lord Bacon's own chaplain, Dr. Rawley, asserting that the appointment was 'a grace, if I err not, *scarce* known before.'

2. If sir William Blackstone means, (as he evidently does,) that Bacon did not *receive* any fee or salary, as counsel extraordinary, then he is most certainly mistaken; for, in Rymer's Fœdera, vol. 16, p. 596, there is a copy of the letters patent which settle upon Bacon, as counsel extraordinary, a salary or fee of forty pounds a year. He appears not to have been aware of this patent, and solely relied upon the following passage in one of Bacon's letters to the King:—'You formed me of the learned counsel extraordinary, without patent or fee, a kind of *individuum vagum*.'—(Bacon's Works, vol. 12, p. 402.) It might, with some plausibility, be argued, that, in this passage, Bacon means to say, that the King *did not put him to the ex-*

pense of a patent or fee,—not that he graciously abstained from settling a salary upon him—he being, in fact, at that time, (and indeed always,) much in need of money. Bacon, however, as already observed in the text, and as appears from a recital in the patent itself, had been previously appointed to the office of counsel extraordinary by King James, in the same way as in the previous reign, by Queen Elizabeth, *i. e.* without patent and without fee; and we entertain not the slightest doubt that, in the paragraph just cited, Bacon refers to this antecedent appointment.

3. The circumstances of North's appointment are rather interesting. He was made 'one of the King's counsel extraordinary,' in consequence of his having greatly distinguished himself, as counsel for the crown, in the celebrated case of the six members, then before the House of Peers on a writ of error. This important duty was imposed upon him by his cousin, the Attorney-General, who could not himself argue for the King, as he was an assistant in the House of Lords, nor could he prevail on any of the serjeants, or other eminent practitioners, to do it; 'for they said it was against the commons of England, and they dare not undertake it.' 'This action and its consequences,' says his most interesting biographer, 'had the effect of a trumpet to his fame, for the King had no counsel at law then, except

serjeants.' The benchers of the Middle Temple, alleging North's youth, refused to call him up to the bench; but for this slight, says Roger North, 'the very next day, in Westminster Hall, when any of the benchers appeared at the courts, they received reprimands from the judges for their insolence, as if a person whom his Majesty had thought fit to make one of his counsel extraordinary was not worthy to come into their company; and so dismissed them unheard, with declaration that until they had done their duty, in calling Mr. North to their bench, they must not expect to be heard as counsel in his Majesty's courts. This was English, and that evening they conformed, and so were re-instated.'—North's Lives, vol. 1, pp. 64, 69. It appears from the books of the Middle Temple that North was called to the bench on the 5th of June, 1686.

The epithet 'extraordinary' is applied to the king's counsel in order to distinguish them from the attorney and solicitor-general, who are the regular counsel of the crown; and it was thus that Bacon was described both by Elizabeth and James. We may add to this already extended note, that there is this difference between king's counsel and barristers with patents of precedence:—the former have standing salaries, and cannot, without license, plead against the crown;—the

latter receive no salaries, and are not sworn, and, therefore, may so plead.

NOTE (B.) p. 18.

Earl of Essex to Mr. Francis Bacon.

Sir,

I went yesterday to the Queen through the galleries in the morning, afternoon, and at night. I had long speech with her of you, wherein I urged both the point of your extraordinary sufficiency proved to me not only by your last argument, but by the opinion of all men I spake withal, and the point of mine own satisfaction, which, I protested, should be exceeding great, if, for all her unkindness and discomforts past, she should do this one thing for my sake. To the first she answered, that the greatness of your friends, as of my lord Treasurer and myself, did make men give a more favourable testimony than else they would do, thinking thereby they pleased us. And that she did acknowledge you had a great wit, and an excellent gift of speech, and much other good learning. But in law she rather thought you could make show to the utter-

most of your knowledge, than that you were deep. To the second she said, she showed her mislike to the suit as well as I had done my affection in it; and that if there were a yielding, it was fitter to be of my side. I then added, that this was an answer, with which she might deny me all things, if she did not grant them at the first, which was not her manner to do. But her Majesty had made me suffer and give way in many things else; which all I should bear, not only with patience, but with great contentment, if she would but grant my humble suit in this one. And for the pretence of the approbation given you upon partiality, that all the world, lawyers, judges, and all, could not be partial to you; for somewhat you were crossed for their own interest, and some for their friends; but yet all did yield to your merit. She did in this as she useth in all, went from a denial to a delay, and said, when the council were all here, she would think of it; and there was no haste in determining of the place. To which I answered, that my sad heart had need of hasty comfort; and therefore her Majesty must pardon me, if I were hasty and importunate in it. When they come we shall see what will be done; and I wish you all happiness, and rest

Your most affectionate friend,

Essex.

Earl of Essex to Mr. Francis Bacon.

Sir,

I have received your letter, and since I have had opportunity to deal freely with the Queen. I have dealt confidently with her as a matter, wherein I did more labour to overcome her delays, than that I did fear her denial. I told her how much you were thrown down with the correction she had already given you, that she might in that point hold herself already satisfied. And because I found, that Tanfield had been most propounded to her, I did most disable him. I find the Queen very reserved, staying herself upon giving any kind of hope, yet *not passionate against you, till I grew passionate for you.* Then she said that none thought you fit for the place but my lord Treasurer and myself. Marry, the others must some of them say before us for fear or for flattery. I told her the most and wisest of her council had delivered their opinions, and preferred you before all men for that place. And if it would please her Majesty to think, that whatsoever they said contrary to their own words when they spake without witness, might be as factiously spoken, as the other way flatteringly, she would not be deceived. Yet if they had been never for you, but contrarily against you, I thought my credit, joined

with the approbation and mediation of her greatest counsellors, might prevail in a greater matter than this; and urged her, that though she could not signify her mind to others, I might have a secret promise, wherein I should receive great comfort, as in the contrary great unkindness. She said she was neither persuaded nor would hear of it till Easter, when she might advise with her council, who where now all absent; and therefore, *in passion bid me go to bed, if I would talk of nothing else*. Wherefore in passion I went away, saying, while I was with her, I could not but solicit for the cause and the man I so much affected; and therefore I would retire myself till I might be more graciously heard; and so we parted. To morrow I will go hence of purpose, and on Thursday I will write an expostulating letter to her. That night or upon Friday morning I will be here again, and follow on the same course, stirring a discontentment in her, &c. And so wish you all happiness, and rest

Your most assured friend,

ESSEX.

NOTE (C.) p. 53.

'A TRUE remembrance,' says Bacon, 'of the abuse I received of Mr. Attorney-General, [sir Edward Coke] publicly in the Exchequer the first day of term; for the truth whereof I refer myself to all that were present.

'I moved to have a reseizure of the lands of George More, a relapsed recusant, a fugitive, and a practising traitor; and showed better matter for the Queen against the discharge by plea, which is ever with a "salvo jure." And this I did in as gentle and reasonable terms as might be.

'Mr. Attorney kindled at it, and said, "Mr. Bacon, if you have any tooth against me, pluck it out; for it will do you more hurt than all the teeth in your head will do you good." I answered coldly in these very words; "Mr. Attorney, I respect you; I fear you not; and the less you speak of your own greatness, the more I will think of it."

'He replied, "I think scorn to stand upon terms of greatness towards you, who are less than little; less than the least;" and other such strange light terms he gave me, with that insulting, which cannot be expressed.

'Herewith stirred, yet I said no more but this: "Mr.

Attorney, do not depress me so far; for I have been your better, and may be again, when it please the Queen."

'With this he spake, neither I nor himself could tell what; as if he had been born attorney-general; and in the end bade me not meddle with the Queen's business, but with mine own; and that I was unsworn, etc. I told him, sworn or unsworn was all one to an honest man; and that I ever set my service first, and myself second; and wished to God, that he would do the like.

'Then he said, it were good to clap a "cap. utlegatum" on my back! to which I only said he could not, and that he was at fault; for he hunted upon an old scent.

'He gave me a number of disgraceful words besides; which I answered with silence, and showing, that I was not moved with them.'—Bacon's Works, vol. 7, p. 388.

NOTE (D.) P. 150.

'The term Induction (ἐπαγωγὴ) has been employed to denote three very different things:—1. The objective process of investigating particular facts as preparatory to illation;—2. A material illation of the universal

from the singular, warranted either by the general analogies of nature, or by special presumptions afforded by the object matter of any real science;—3. A formal illation of the universal from the individual, as legitimated solely by the laws of thought, and abstracted from the conditions of any particular matter.

'That the first of these, an inventive process, is beyond the sphere of a critical science, is manifest; nor has Induction, in this abusive application of the term, been ever arrogated to Logic. By logicians, however, the second and third have been confounded into one, and, under every phasis of misconception, treated as a simple and purely logical operation. Yet nothing can be clearer than that these constitute two separate acts, and that the second is not properly a logical process at all. In logic, all inference is determined *ratione formæ*, the conclusion being necessarily implied in the very conception of the premises. In this second Induction, on the contrary, the illation is effected *vi materiæ*, on grounds not involved in the notion of its antecedent. To take, for example, Dr. Whately's instance: The naturalist who, from the proposition—'ox, sheep, deer, goat, (*i. e. some*) horned animals, ruminate,' infers the conclusion—'*all* horned animals ruminate,' may be warranted in this procedure by the material probabilities of his science; but his illation is logically vi-

cious. Here the inference is not necessitated by the laws of thought; the *some* of the antecedent, as it is not *thought* either to contain or constitute, so it does not mentally determine, the *all* of the consequent; and the reasoner must transcend the sphere of logic if he would attempt to vindicate the truth of his conclusion. And yet, this has by logicians been almost universally done. Induction they have distinguished into *perfect* and *imperfect*, according as the *whole* concluded was inferred from *all*, or from *some* only of its constituent parts. They thus involved themselves in a twofold absurdity. For, on the one hand, they recognised the consequence of the imperfect Induction to be legitimate, though, admitting it to be not necessarily cogent; as if logic could infer with a degree of certainty inferior to the highest; and, on the other, they attempted to corroborate this imbecility, by calling in real presumptions—physical, psychological, metaphysical—which logic could neither, as a formal science, know, nor, as an apodictic science, take into account. This was a corollary of the fundamental error to which we have already alluded—the non-exclusion of all material modality from the domain of logic. Thus, it was maintained, that, in necessary matter, the imperfect Induction was necessarily conclusive; as if logic could be aware of what was necessary matter—as if, indeed, this were not itself the fre-

quent point of controversy in the objective sciences themselves.

'The two first processes to which the name of Induction has been given, being thus excluded, it remains only to say a few words in explanation of that Induction, with which alone logic is concerned, but the nature of which has, by almost all logicians, been wholly misrepresented.

'Logic does not consider things as they exist really and in themselves, but only the general forms of thought under which the mind conceives them; in the language of the schools, logic is conversant, not about *first*, but about *second notions*. Thus a logical inference is not determined by any objective relation of Causality subsisting between the terms of the premises and conclusion, but solely by the subjective relation of Reason and Consequence, under which they are construed to the mind in thought. The notion conceived as determining, is the *reason* or *antecedent;* the notion conceived as determined, is the *consequent*. Now, the mind can think two notions under the formal relation of reason and consequence, only in one or other of two modes. Either the determining notion must be conceived as a *whole, containing*, and therefore necessitating, the determined notion, conceived as its *contained part* or *parts;*—or the determining notion must be conceived

as the *parts constituting*, and, therefore, necessitating the determined notion, conceived as their *constituted whole*. Considered, indeed, absolutely and in themselves, the *whole* and *all the parts* are identical. Relatively, however, to us, they are not; for in the order of thought, (and logic is only conversant with the laws of thought,) the whole may be conceived first, and then by mental analysis separated into its parts; or the parts may be conceived first, and then by mental synthesis collected into a whole. Logical inference is thus of two, and only of two, kinds:—it must proceed either from the whole to the parts, or from the parts to the whole; and it is only under the character of a constituted or containing whole, or of a constituting or contained part, that anything can become the term of a logical argumentation.

'Before proceeding, we must, however, allude to the nature of the whole and part, about which logic is conversant. These are not real or essential existences, but creations of the mind itself, in secondary operation on the primary objects of its knowledge. Things may be conceived the *same*, inasmuch as they are conceived the subjects of the same attribute, or collection of attributes, (*i. e.* of the same nature:) inasmuch as they are conceived the same, they must be conceived as the parts constituent of, and contained under, a *whole*: and a

they are conceived the same, only as they are conceived to be the subjects of the same nature, this common nature must be convertible with that whole. A logical or universal whole is called a *genus* when its parts are also containing wholes or species; a *species* when its parts are only contained parts or individuals.

'Such being the nature and relations of a logical whole and parts, it is manifest what must be the conditions under which the two kinds of logical inference are possible. The one of these, the process from the whole to the parts, is *Deductive* reasoning, (or Syllogism proper;) the other, the process from the parts to the whole, is *Inductive* reasoning. The former is governed by the rule—What belongs (or does not belong) to the containing whole, belongs (or does not belong) to each and all of the contained parts. The latter by the rule—What belongs (or does not belong) to *all* the constituent parts, belongs (or does not belong) to the constituted whole. These rules exclusively determine all formal inference; whatever transcends or violates them, transcends or violates logic. Both are equally absolute. It would be not less illegal to infer by the Deductive syllogism an attribute, belonging to the whole, of something it was not conceived to contain as a part; than by the Inductive, to conclude of the whole, what is not conceived as a predicate of all its

constituent parts. In either case, the consequent is not *thought* as determined by the antecedent;—the premises do not involve the conclusion.

'The Deductive and Inductive processes are elements of logic equally essential. Each requires the other. The former is only possible through the latter; and the latter is only valuable as realizing the possibility of the former. As our knowledge commences with the apprehension of singulars, every universal whole is consequently only a knowledge at second-hand. Deductive reasoning is thus not an original and independent process. The universal major proposition, out of which it developes the conclusion, is itself necessarily the conclusion of a foregone Induction, and, mediately or immediately, an inference—a collection, from individual objects of perception, and consciousness. Logic, therefore, as a definite and self-sufficient science, must equally vindicate the formal purity of the synthetic illation, by which it ascends to its wholes, as the analytic illation by which it re-descends to their parts.

'Not only is the Deductive thus, in a general way, dependent for its possibility on the Inductive syllogism; the former is, what has not been observed, in principle and detail, in whole and in part, in end and in means, in perfection and imperfection, precisely an inverted counterpart of the latter. The attempts that have

been made by almost every logician, except (perhaps?) Aristotle, to assimilate and even identify the two processes, by reducing the Inductive syllogism to the schematic proprieties of the Deductive—proceeding as they do on a total misconception of their analogy and differences, have contributed to involve the doctrine of Logical Induction in a cloud of error and confusion. The Inductive inference is equally independent, and, though far less complex, equally worthy of analysis, as the Deductive; it is governed by its own laws; and, if judged aright, must be estimated by its own standard. The correlation of the two processes is best exemplified by employing the same symbols in our ascent though an Inductive, and our re-descent through a Deductive syllogism.

Inductive.	*Deductive.*
x, y, z are A;	B is A;
x, y, z are (whole) B;	x, y, z are (under) B;
Therefore, B is A.	Therefore, x, y, z are A.
or	*or*
A contains x, y, z;	A contains B.
x, y, z constitute B;	B contains x, y, z;
Therefore, A contains B.	Therefore, A contains x, y, z.

These two syllogisms exhibit, each in its kind, the one natural and perfect figure. This will be at once admitted of the Deductive which is in the first. But the

Inductive, estimated, as it has always been, by the standard of the Deductive, will appear a monster. It appears on that standard only in the third figure; and then, contrary to the rule of that figure, it has an universal conclusion. (V. *Analyt. Pr.* i. 22, § 8.) But when we look less partially and more profoundly into the matter, our conclusion will be very different. In the first place, we find that the two syllogisms present so systematic a relation of contrast and similarity, that, the perfection of the one being admitted, we are analogically led to presume the perfection of the other. In the *propositions*, the order of the terms remains unchanged: but the order of the propositions themselves are reversed; the conclusion of the one syllogism forming the major premise of the other. Of the *terms* the major is common to both; but the middle term of the one is the minor of the other. In the common minor premise, the terms, though identical, have, with the different nature of the process, changed their relation in thought. In the Inductive, the parts being conceived as constituting the whole, are the determining notion; whereas, in the Deductive, the parts being conceived as contained under the whole, are the determined.—But, in the second place, however apparently dissimilar in figure and proportion may be the two syllogisms on this partial standard, it will be found,

if we ascend to a higher, that a common general principle regulates a similar, nay, a one exclusive perfection in each. The perfection of figure in *all* syllogisms is this—*that the middle term should be the determined notion in the proposition, the determining notion in the assumption.* This condition is realized in the first figure of the deductive syllogism. There the middle term is the subject (contained, determined notion) in the proposition; and the predicate (containing, determining notion) in the assumption. In like manner, in our Inductive syllogism, the middle term is the subject (contained, determined notion) of the proposition, and the constituent (determining notion) of the assumption. Thus, not only are the Inductive and Deductive syllogisms, in a general sense, reversed processes; the perfect figure of the one is the exact evolution or involution of the perfect figure of the other.—The same analogy holds with their imperfections. Taking, for example, what logicians have in general given as the perfected figure, but which is, in fact, an unnatural perversion of the Inductive syllogism, (*i. e.* its reduction to the first figure, by converting the terms of the minor premise,) we shall find that its reversal into a Deductive syllogism affords, as we should have anticipated, only a kindred imperfection (in the third figure.)

Inductive.	*Deductive.*
x, y, z are A;	B is A;
B is x, y, z;	B is x, y, z;
Therefore, B is A.	Therefore, x, y, z are A.
or	*or*
A contains x, y, z;	A contains B;
x, y, z contain B;	x, y, z contain B;
Therefore, A contains B.	Therefore, A contains x, y, z.

We call this reduction of the Inductive syllogism an *unnatural perversion*, because in the converted minor premise the constituent parts are perverted into a containing whole, and the containing whole into a subject, contained under its constituent parts.'—Edinburgh Review for April, 1833, art. ix.

NOTE (E.) P. 173.

For the extract from Blackstone's unpublished lectures, given in the text, we are indebted to the North American Review for April, 1831, art. ix.: it was communicated to the writer of that able article by Dr. Buckland's uncle. The observations with which the reviewer introduces it are so interesting, that we are tempted to quote them:—

'We were never more forcibly struck with the great

distance at which those benighted times [when Galileo was persecuted] have been left, than when on a visit to a friend at the University of Oxford, in England, in 1827. It was upon the occasion of Dr. Buckland's annual geological lecture on horseback. This very novel mode of explaining the great geological features of a country being peculiar to that eminent man, we shall, we hope, amuse our readers, by giving a brief account of it.

'About the hour of noon, near a hundred noblemen and gentlemen on horseback left the city with the Professor, and following the London road at a very animating pace, halted at some gravel pits in the valley. Here Dr. Buckland, dismounting, and gaining a small eminence, addressed the assembly of equestrians in his agreeable, colloquial manner, on the causes which had accumulated the beds of gravel and oyster-shells on which they were standing; he then went rapidly, but very eloquently, into the consideration of great bodies of water in motion, of the abrasion and ruin of the strata, the accompanying denudation of vallies, and the deposit of the *detritus;* illustrating the subject from time to time, by pointing to the inequalities of the surrounding country, showing where the gorges had been left on the retreat of the waters, and how the contemporaneous vallies were bounded by the once continuous strata. Having touched upon every prominent feature

of the country around, the Professor re-mounted his horse, and proceeded at a hand gallop over the plain, for the Shotover hills, the cavaliers pressing around him, bridle in hand, that no observation which fell from him might be lost. At the foot of the hills he again stopped at a moist, springy place, and took occasion—in adverting to the atmospheric water received by the porous, superficial soil, being here resisted in its descent, and thrown out by a bed of clay—to explain the origin and nature of springs of a particular character. After visiting the pits of Kimmeridge clay, famous for the Deltoid oyster, this equestrian lecture was most worthily concluded by a very eloquent account of the secondary beds in the vicinity of Oxford, and the Saurian and other organic remains found in them; the whole delivered by the Reverend Professor on horseback, receiving the most profound and grateful attention from every person present. At the conclusion, he uncovered his head, and bowing to his auditors, they dispersed, leaving him with his private friends, who, after some further investigations, returned slowly to the city to finish the day at his hospitable board. It was in the course of that evening, that a venerable clergyman, of whose octogenarian life, more than sixty years had been passed in immediate connexion with the University, in answer to a remark we made, that natural sci-

ence appeared to be cherished at Oxford as much as at the sister University, observed, "The character of this University has been misrepresented; it has at all times given, and yet continues to give, great men to the nation. Had Oxford never existed, English history would not have been what it now is, and the English character would, perhaps, have been materially different. This, to those who value the moral power of this country, is a sufficient answer to the harsh assertions which have been made, in relation to its supposed monastic habits, by men who, perhaps, had an interest in debasing the English character to their own conceptions of the dignity of man. To be sure, the lectures you have heard from my nephew this day, on the modern science of geology, are at so great a distance from the ancient scholastic manners of the University, that they have apparently something revolutionary in their character; and it is true, that this science is hardly out of its cradle, and here at Oxford, has been exclusively rocked and nursed by Dr. Buckland, who seems to have been brought forward himself, at the right point of time, by nature and education. Yet Oxford has never, at the most distant periods, been insensible to the progress of intellectual improvement, although she has been slow to convince herself that every innovation was an improvement. When Blackstone prepared to deli-

ver his Law Lectures, he too was considered an innovator, and was made to feel, in various ways, the influence of established opinions." ' &c.—North American Review for April, 1831, art. ix., p. 472.

NOTE (F.) P. 220.

'ABOUT the year 1645,' says Dr. John Wallis, 'while I lived in London, (at a time when, by our civil wars, Academical Studies were much interrupted in both our universities,) besides the conversation of divers eminent Divines, as to matters theological, I had the opportunity of being acquainted with divers worthy persons, inquisitive into Natural Philosophy, and other parts of humane learning, and particularly of what hath been called the *New Philosophy* or *Experimental Philosophy*.

'We did by agreement, divers of us, meet weekly in London on a certain day, to treat and discourse of such affairs. Of which number were Dr. John Wilkins, (afterwards Bishop of Chester,) Dr. Jonathan Goddard, Dr. George Ent, Dr. Glisson, Dr. Merret, (Doctors in Physic,) Mr. Samuel Foster, then Professor of Astro-

nomy at Gresham College, Mr. Theodore Hank, (a German of the Palatinate, and then resident in London, who, I think, gave the first occasion, and first suggested those meetings,) and many others.

'These meetings we held sometimes at Dr. Goddard's lodgings in Wood Street, (or some convenient place near,) on occasion of his keeping an Operator in his house, for grinding glasses for telescopes and microscopes; and sometimes at a convenient place in Cheapside;* sometimes at Gresham College, or some place near adjoyning. Our business was (precluding matters of theology and state affairs,) to discourse and consider of Philosophical Enquiries, and such as related thereunto; as Physick, Anatomy, Geometry, Astronomy, Navigation, Staticks, Magneticks, Chymicks, Mechanicks, and Natural Experiments, with the state of these studies, as then cultivated at home and abroad. We there discoursed of the circulation of the blood, the valves in the veins, the *Venæ Lacteæ*, the Lymphatick Vessels, the Copernican Hypothesis, the nature of Comets and New Stars, the Satellites of Jupiter, the Oval Shape (as it then appeared,) of Saturn, the Spots in the Sun, and its turning on its own axis, the Inequalities

* The 'convenient place' to which Dr. Wallis refers, was the Bull-head tavern in Cheapside.—See Aubrey, vol. 2, p. 583.

and Selenography of the Moon, the several phases of Venus and Mercury, the improvement of Telescopes, and grinding of glasses for that purpose, the weight of air, the possibility or impossibility of vacuities, and nature's abhorrence thereof, the Torricellian experiment in quicksilver, the descent of heavy bodies, and the degrees of acceleration therein; and divers other things of like nature. Some of which were then but new discoveries, and others not so generally known and imbraced, as now they are, with other things appertaining to what hath been called *The New Philosophy*, which, from the times of Galileo at Florence, and sir Francis Bacon, (lord Verulam,) in England, hath been much cultivated in Italy, France, Germany, and other parts abroad, as well as with us in England.

'About the year 1648, 1649, some of our company being removed to Oxford, (first Dr. Wilkins, then I, and soon after Dr. Goddard,) our company divided. Those in London continued to meet there as before, (and we with them, when we had occasion to be there,) and those of us at Oxford, with Dr. Ward, (since Bp. of Salisbury,) Dr. Ralph Bathurst, (now President of Trinity College, in Oxford,) Dr. Petty, (since sir William Petty,) Dr. Willis, (then an eminent Physician in Oxford,) and divers others, continued such meetings in Oxford; and brought those studies into fashion there;

meeting first at Dr. Petty's Lodgings (in an Apothecarie's house,) because of the convenience of inspecting Drugs and the like, as there was occasion; and after his remove to Ireland, (tho' not so constantly,) at the Lodgings of Dr. Wilkins, then Warden of Wadham Coll.; and after his removal to Trinity College, in Cambridge, at the Lodgings of the Honourable Mr. Robert Boyle, then resident for divers years in Oxford. Those meetings in London continued, and (after the King's return in 1660,) were increased with the accession of divers worthy and honorable persons; and were afterwards incorporated by the name of the Royal Society, &c., and so continued to this day.'—From Dr. John Wallis's Account of some Passages of his own Life, printed in the App. No. xi. to Preface to Hearne's edition of Peter Langtoft's Chronicle.

NOTE (G.) P. 267.

'To the Right Honourable the Lords Spiritual and Temporal, in the High Court of Parliament assembled:

'The Confession and humble Submission of me, the Lord Chancellor.

'Upon advised consideration of the charge, descending

into my own conscience, and calling my memory to account so far as I am able, I do plainly and ingenuously confess, that I am guilty of corruption; and do renounce all defence, and put myself upon the grace and mercy of your lordships.

'The particulars I confess and declare to be as followeth:—

'1. To the first article of the charge, viz. in the cause between sir Rowland Egerton and Edward Egerton, the lord Chancellor received five hundred pounds on the part of sir Rowland Egerton, before he decreed the cause:—I do confess and declare, that upon a reference from his majesty, of all suits and controversies between sir Rowland Egerton and Mr. Edward Egerton, both parties submitted themselves to my award, by recognizance reciprocal in ten thousand merks a-piece. Thereupon, after divers hearings, I made my award, with advice and consent of my lord Hobart. The award was perfected and published to the parties, which was in February; then, some days after, the five hundred pounds mentioned in the charge was delivered unto me. Afterwards Mr. Edward Egerton fled off from the award; then, in Midsummer term following, a suit was begun in chancery by sir Rowland, to have the award confirmed; and upon that suit was the decree made, which is mentioned in the article.

'2. To the second article of the charge, viz. in the

same cause, he received from Edward Egerton four hundred pounds:—I confess and declare, that, soon after my first coming to the seal, (being a time when I was presented by many,) the four hundred pounds mentioned in the charge was delivered unto me in a purse, and I now call to mind, from Mr. Edward Egerton; but, as far as I can remember, it was expressed by them that brought it, to be for favours past, and not in respect to favours to come.

'3. To the third article of the charge, viz. in the cause between Hodie and Hodye, he received a dozen of buttons, of the value of fifty pounds, about a fortnight after the cause was ended:—I confess and declare, that, as it is laid in the charge, about a fortnight after the cause was ended (it being a suit of a great inheritance,) there were gold buttons about the value of fifty pounds, as is mentioned in the charge, presented unto me, as I remember, by sir Thomas Perient and the party himself.

'4. To the fourth article of the charge, viz. in the cause between the lady Wharton and the co-heirs of sir Francis Willoughby, he received of the lady Wharton three hundred and ten pounds:—I confess and declare, that I received of the lady Wharton, at two several times, (as I remember) in gold, two hundred pounds and an hundred pieces, and this was certainly *pendente*

lite; but yet I have a vehement suspicion that there was some shuffling between Mr. Shute and the Register, in entering some orders, which afterwards I did distaste.

'5. To the fifth article of the charge, viz. in sir Thomas Moncke's cause, he received from sir Thomas Monk, by the hands of sir Henry Helmes, an hundred and ten pounds; but this was three quarters of a year after the suit was ended:—I confess it to be true, that I received an hundred pieces; but it was long after the suit ended, as is contained in the charge.

'6. To the sixth article of the charge, viz. in the cause between sir John Treavor and Ascue, he received, on the part of sir John Treavor, an hundred pounds:—I confess and declare, that I received at New Year's-tide an hundred pounds from sir John Treavor; and because it came as a New Year's gift, I neglected to inquire whether the cause was ended or depending; but since I find, that though the cause was then dismissed to a trial at law, yet the equity is reserved, so as it was in that kind, *pendente lite*.

'7. To the seventh article of the charge, viz. in the cause between Holman and Yonge, he received of Yonge an hundred pounds, after the decree made for him:—I confess and declare, that, as I remember, a good while after the cause ended, I received an hun-

dred pounds, either by Mr. Tobye Mathew, or from Yonge himself; but whereas I understood that there was some money given by Holman to my servant Hatcher, with that certainly I was never made privy.

'8. To the eighth article of the charge, viz. in the cause between Fisher and Wrenham, the lord Chancellor, after the decree passed, received from Fisher a suit of hangings, worth an hundred and sixty pounds and better, which Fisher gave by advice of Mr. Shute:—I confess and declare, that some time after the decree passed; I being at that time upon remove to Yorke-House, I did receive a suit of hangings, of the value (I think) mentioned in the charge, by Mr. Shute, as from sir Edward Fisher, towards the furnishing of my house; as some others that were no way suitors did present me the like about that time.

'9. To the ninth article of the charge, viz. in the cause between Kenneday and Vanlore, he received a rich cabinet from Kenneday, prized at eight hundred pounds:—I confess and declare, that such a cabinet was brought to my house, though nothing near half the value; and that I said to him that brought it, that I came to view it, and not to receive it; and gave commandment that it should be carried back, and was offended when I heard it was not; and some year and an half after, as I remember, sir John Kenneday, hav-

ing all that time refused to take it away, as I am told by my servants, I was petitioned by one Pinckney, that it might be delivered to him, for that he stood engaged for the money that sir John Kenneday paid for it. And thereupon sir John Kenneday wrote a letter to my servant Shereborne with his own hand, desiring that I would not do him that disgrace as to return that gift back, much less to put it into a wrong hand; and so it remains yet ready to be returned to whom your lordships shall appoint.

'10. To the tenth article of the charge, viz. he borrowed of Vanlore a thousand pounds, upon his own bond, at one time, and the like sum at another time, upon his lordship's own bill, subscribed by Mr. Hunt, his man:—I confess and declare that I borrowed the money in the article set down; and that this is a true debt. And I remember well that I wrote a letter from Kewe, above a twelvemonth since, to a friend about the King; wherein I desired that, whereas I owed Peter Vanlore two thousand pounds, his majesty would be pleased to grant me so much, out of his fine set upon him in the Star Chamber.

'11. To the eleventh article of the charge, viz. he received of Richard Scott two hundred pounds, after his cause was decreed (but upon a precedent promise,) all which was transacted by Mr. Shute:—I confess and de-

clare, that some fortnight after, as I remember, that the decree passed, I received two hundred pounds, as from Mr. Scott, by Mr. Shute; but for any precedent promise or transaction by Mr. Shute, certain I am, I knew of none.

'12. To the twelfth article of the charge, viz. he received in the same cause, of the part of sir John Lentall, an hundred pounds:—I confess and declare, that some months after, as I remember, that the decree passed, I received an hundred pounds by my servant Shereburne, as from sir John Lentall, who was not the adverse party to Scott, but a third person, relieved by the same decree, in the suit of one Powre.

'13. To the thirteenth article of the charge, viz. he received of Mr. Wroth an hundred pounds, in respect of the cause between him and sir Arthur Maynewaringe:—I confess and declare, that this cause, being a cause for inheritance of good value, was ended by my arbitrament, and consent of parties; and so a decree passed of course. And some month after the cause thus ended, the hundred pounds mentioned in the article was delivered to me by my servant Hunt.

'14. To the fourteenth article of the charge, viz. he received of sir Raphe Hansby, having a cause depending before him, five hundred pounds:—I confess and declare, that there were two decrees, one, as I remem-

her, for the inheritance, and the other for goods and chattels, but all upon one bill; and some good time after the first decree, and before the second, the said five hundred pounds were delivered me by Mr. Tobye Mathew, so as I cannot deny but it was upon the matter, *pendente lite*.

'15. To the fifteenth article of the charge, viz. William Compton being to have an extent for a debt of one thousand and two hundred pounds, the lord Chancellor stayed it, and wrote his letter, upon which part of the debt was paid presently, and part at a future day. The lord Chancellor hereupon sends to borrow five hundred pounds; and because Compton was to pay four hundred pounds to one Huxley, his lordship requires Huxley to forbear it six months, and thereupon obtains the money from Compton. The money being unpaid, suit grows between Huxley and Compton in Chancery, where his lordship decrees Compton to pay Huxley the debt, with damages and costs, when it was in his own hands:—I declare, that in my conscience, the stay of the extent was just, being an extremity against a nobleman, by whom Compton could be no loser. The money was plainly borrowed of Compton upon bond with interest; and the message to Huxley was only to intreat him to give Compton a longer day, and in no sort to make me debtor or responsible to Huxley; and, therefore, though

I were not ready to pay Compton his money, as I would have been glad to have done, save only one hundred pounds, which is paid; I could not deny justice to Huxley, in as ample manner as if nothing had been between Compton and me. But, if Compton hath been damnified in my respect, I am to consider it to Compton.

'16. To the sixteenth article of the charge, viz. in the cause between sir William Brumcker and Awbrey, the lord Chancellor received from Awbrey an hundred pounds:—I do confess and declare, that the money was given and received; but the manner of it I leave to the witnesses.

'17. To the seventeenth article of the charge, viz. in the lord Mountague's cause, he received from the lord Mountague six or seven hundred pounds; and more was to be paid at the ending of the cause:—I confess and declare, there was money given, and (as I remember) by Mr. Bevis Thelwall, to the sum mentioned in the article after the cause was decreed; but I cannot say it was ended, for there have been many orders since, caused by sir Frauncis Englefeild's contempts; and I do remember that, when Thelwall brought the money, he said, that my lord would be further thankful if he could once get his quiet; to which speech I gave little regard.

'18. To the eighteenth article of the charge, viz. in the cause of Mr. Dunch, he received of Mr. Dunch two hundred pounds:—I confess and declare, that it was delivered by Mr. Thelwall to Hatcher my servant, for me, as I think, some time after the decree; but I cannot precisely inform myself of the time.

'19. To the nineteenth article of the charge, viz. in the cause between Reynell and Peacock, he received from Reynell two hundred pounds, and a diamond ring worth five or six hundred pounds:—I confess and declare, that, at my first coming to the Seal, when I was at Whitehall, my servant Hunt delivered me two hundred pounds, from sir George Reynell, my near ally, to be bestowed upon furniture of my house; adding farther, that he received divers former favours from me; and this was, as I verily think, before any suit begun. The ring was received certainly *pendente lite;* and, though it were at new year's tide, yet it was too great a value for a new-year's gift, though, as I take it, nothing near the value mentioned in the article.

'20. To the twentieth article of the charge, viz. he took of Peacock an hundred pounds, and borrowed a thousand pounds, without interest, security, or time of payment:—I confess and declare that I received of Mr. Peacock an hundred pounds at Dorsett-House, at my first coming to the Seal, as a present; at which time no

suit was begun; and that, the summer after, I sent my then servant Lister to Mr. Rolf, my good friend and neighbour, at St. Albans, to use his means with Mr. Peacock (who was accounted a monied man,) for the borrowing of five hundred pounds; and after, by my servant Hatcher, for borrowing of five hundred pounds more, which Mr. Rolf procured, and told me, at both times, that it should be without interest, script, or note; and that I should take my own time for payment of it.

'21. To the one and twentieth article of the charge, viz. in the cause between Smithwick and Wyche, he received from Smithwick two hundred pounds, which was repaid:—I confess and declare, that my servant Hunt did, upon his accompt, being my receiver of the fines of original writs, charge himself with two hundred pounds, formerly received of Smithwick; which, after that I had understood the nature of it, I ordered him to repay it, and to defaulk it of his accompt.

'22. To the two and twentieth article of the charge, viz. in the cause of sir Henry Ruswell, he received money from Ruswell; but it is not certain how much:—I confess and declare, that I received money from my servant Hunt, as from Mr. Ruswell, in a purse; and whereas the sum in the article is indefinite, I confess it to be three or four hundred pounds; and it was about some months after the cause was decreed; in which decree I was assisted by two of the judges.

'23. To the three and twentieth article of the charge, viz. in the cause of Mr. Barker, the lord Chancellor received from Barker seven hundred pounds:—I confess and declare, that the money mentioned in the article was received from Mr. Barker, some time after the decree passed.

'24. To the four and twentieth article, five and twentieth, and six and twentieth articles of the charge, viz. the four and twentieth, there being a reference from his majesty to his lordship of a business between the Grocers and the Apothecaries, the lord Chancellor received of the Grocers two hundred pounds. The five and twentieth article: in the same cause, he received of the Apothecaries that stood with the Grocers, a taster of gold, worth between forty and fifty pounds, and a present of ambergrease. And the six and twentieth article: he received of the New Company of the Apothecaries that stood against the Grocers, an hundred pounds:—To these I confess and declare, that the several sums from the three parties were received; and for that it was no judicial business, but a concord, or composition between the parties, and that as I thought all had received good, and they were all three common purses, I thought it the less matter to receive that which they voluntarily presented: for if I had taken it in the nature of a corrupt bribe, I knew it could not be

concealed, because it must needs be put to accompt to the three several companies.

'27. To the seven and twentieth article of the charge, viz. he took of the French merchants a thousand pounds, to constrain the vintners of London to take from them fifteen hundred tons of wine; to accomplish which, he used very indirect means, by colour of his office and authority, without bill or suit depending; terrifying the vintners, by threats and imprisonments of their persons, to buy wines, whereof they had no need or use, at higher rates than they were vendible:—I do confess and declare, that sir Thomas Smith did deal with me in the behalf of the French company; informing me, that the vintners, by combination, would not take off their wines at any reasonable prices. That it would destroy their trade, and stay their voyage for that year; and that it was a fair business, and concerned the state; and he doubted not but I should receive thanks from the King, and honour by it; and that they would gratify me with a thousand pounds for my travel in it; whereupon I treated between them, by way of persuasion, and (to prevent any compulsory suit) propounding such a price as the vintners might be gainers six pounds a ton, as it was then maintained to me; and after, the merchants petitioning to the King, and his majesty recommending the business unto me, as a busi-

ness that concerned his customs and the navy, I dealt more earnestly and peremptorily in it; and, as I think, restrained in the messengers' hands for a day or two some that were the more stiff; and afterwards the merchants presented me with a thousand pounds out of their common purse; acknowledging themselves that I had kept them from a kind of ruin, and still maintaining to me that the vintners, if they were not insatiably minded, had a very competent gain. This is the merits of the cause, as it then appeared unto me.

'28. To the eight and twentieth article of the charge; viz. the lord Chancellor hath given way to great exactions by his servants, both in respect of private seals, and otherwise for sealing of injunctions:—I confess, it was a great fault of neglect in me, that I looked no better to my servants.

'This declaration I have made to your lordships with a sincere mind: humbly craving, that if there should be any mistaking, your lordships would impute it to want of memory, and not to any desire of mine to obscure truth, or palliate any thing: for I do again confess, that in the points charged upon me, although they should be taken as myself have declared them, there is a great deal of corruption and neglect, for which I am heartily and penitently sorry, and submit myself to the judgment, grace, and mercy of the court.

'For extenuation, I will use none concerning the matters themselves; only it may please your lordships, out of your nobleness, to cast your eyes of compassion upon my person and estate. I was never noted for an avaricious man. And the apostle saith, that covetousness is the root of all evil. I hope also, that your lordships do the rather find me in the state of grace; for that in all these particulars, there are few or none that are not almost two years old, whereas those that have an habit of corruption do commonly wax worse and worse; so that it hath pleased God to prepare me by precedent degrees of amendment, to my present penitency. And for my estate, it is so mean and poor, as my care is now chiefly to satisfy my debts.

'And so, fearing I have troubled your lordships too long, I shall conclude with an humble suit unto you, that if your lordships proceed to sentence, your sentence may not be heavy to my ruin, but gracious, and mixed with mercy; and not only so, but that you would be noble intercessors for me to his majesty likewise, for his grace and favour.

'Your Lordships' humble servant and suppliant,

'Fr. St. Alban, Canc.'

NOTE (H.) P. 271.

Mr. Bushell was sent by lord Bacon to know the result of his confession and submission, 'which I was loath,' says he, 'at my return, to acquaint him with; for, alas! his sovereign's favour was not in so high a measure, but he (like the Pharisee,) must be sacrificed in flames of his own raising, and so perished, (like Icarus,) in that his lofty design, the great revenue of his office being lost, and his titles of honour saved but by the bishops' votes; whereto he replied, that he was only bound to thank his clergy: the thunder of which fatal sentence did much perplex my troubled thoughts, as well as others, to see that famous lord, who procured his majesty to call this Parliament, must be the first subject of their revengeful wrath; and that so unparalleled a master should be then brought upon the publick stage for the foolish miscarriages of his own servants, whereof (with grief of heart,) I confess myself to be one. Yet, shortly after, the King dissolved the Parliament, but never restored that matchless lord to his place; which made him then to wish the many years he had spent in state-policy and law-study, had been solely devoted to true philosophy: for (said he) the one at best doth but comprehend man's frailty in its greatest

splendour, but the other the mysterious knowledge of all things created in the six dayes work.'—[From pp. 19, 20 of the Post-script to 'An Extract by Mr. Bushell of his late Abridgment of the Lord Chancellor Bacon's Philosophical Theory in Mineral Prosecutions. London, 1660.]

NOTE (I.) P. 186.

THE 127th aphorism of the *Novum Organum*, cited in the text, abundantly proves that whatever may be the opinion of some learned writers, lord Bacon himself considered that the precepts which he laid down for conducting us aright in our search after knowledge, were not confined to physics, but alike applicable to the phenomena of the human mind—indeed to all science. If the inductive method cannot be properly applied to psychological science, how is it, we would ask, that we have become acquainted with the laws and constitution of the mind? Our knowledge of these subjects is not instinctive—we do not imbibe it with our breath; but slowly and with difficulty obtain it. 'The mind,' says lord Brougham, in his late discourse of Na-

tural Theology, 'equally with matter, is the proper subject of *observation*, by means of consciousness, which enables us to arrest and examine our own thoughts: it is even the subject of *experiment*, by the power which we have, through the efforts of abstraction and attention, of turning those thoughts into courses not natural to them, not spontaneous, and watching the results.' How much the science of Natural Theology would suffer, if these were not undeniable truths, the readers of this profound Discourse will be best able to judge.

NOTE (J.) P. 307.

Most, if not all, of lord Bacon's biographers positively assert that he died *childless*. Aubrey, however, who had good opportunities of informing himself on this head, both from the time in which he lived and his position in society, expressly says that he left a daughter, who married her gentleman usher, sir Thomas Underhill, and was living after the beheading of King Charles I.

Lord Bacon's wife, one of the daughters of Benedict Barnham, alderman of London, survived her illustrious

husband upwards of twenty years: she died on the 29th June, 1650, and was buried in the chancel of Eyeworth Church, Bedfordshire. (Montagu's Life, note H. H. H.) Anthony, lord Bacon's only uterine brother, died in his lifetime; he was a gentleman, says sir Henry Wotton, of impotent feet, but a nimble head; and being of a provident nature, contrary to his brother the lord Viscount St. Albans, amassed a considerable fortune—not, if sir Henry was rightly informed, by the most creditable means.—*Reliquiæ Wottonianæ*, p. 168; and see ante, p. 30.

ERRATA.

Page 146, line 14, *for* conclusions *read* exclusions.
„ 225, „ 4, *for* given *read* forgiven.

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DAVIDSON, PRINTER,
SERLE'S PLACE, CAREY STREET.

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